



**Universiteit
Leiden**
The Netherlands

School attendance and problematic school absenteeism in youth

Kearney, C.A.; Heyne, D.A.; González, C.; Kearney, Christopher; González, Carolina;
Heyne, David

Citation

Kearney, C. A., Heyne, D. A., & González, C. (2021). *School attendance and problematic school absenteeism in youth*. (C. Kearney, C. González, & D. Heyne, Eds.) (Vol. 11). Lausanne: Frontiers Media SA. doi:10.3389/978-2-88966-321-7

Version: Publisher's Version
License: [Creative Commons CC BY 4.0 license](#)
Downloaded from: <https://hdl.handle.net/1887/3256579>

Note: To cite this publication please use the final published version (if applicable).

SCHOOL ATTENDANCE AND PROBLEMATIC SCHOOL ABSENTEEISM IN YOUTH

EDITED BY: Christopher Kearney, Carolina González and David Heyne
PUBLISHED IN: Frontiers in Psychology, Frontiers in Education and
Frontiers in Psychiatry





frontiers

Frontiers eBook Copyright Statement

The copyright in the text of individual articles in this eBook is the property of their respective authors or their respective institutions or funders. The copyright in graphics and images within each article may be subject to copyright of other parties. In both cases this is subject to a license granted to Frontiers.

The compilation of articles constituting this eBook is the property of Frontiers.

Each article within this eBook, and the eBook itself, are published under the most recent version of the Creative Commons CC-BY licence.

The version current at the date of publication of this eBook is CC-BY 4.0. If the CC-BY licence is updated, the licence granted by Frontiers is automatically updated to the new version.

When exercising any right under the CC-BY licence, Frontiers must be attributed as the original publisher of the article or eBook, as applicable.

Authors have the responsibility of ensuring that any graphics or other materials which are the property of others may be included in the CC-BY licence, but this should be checked before relying on the CC-BY licence to reproduce those materials. Any copyright notices relating to those materials must be complied with.

Copyright and source acknowledgement notices may not be removed and must be displayed in any copy, derivative work or partial copy which includes the elements in question.

All copyright, and all rights therein, are protected by national and international copyright laws. The above represents a summary only. For further information please read Frontiers' Conditions for Website Use and Copyright Statement, and the applicable CC-BY licence.

ISSN 1664-8714

ISBN 978-2-88966-321-7

DOI 10.3389/978-2-88966-321-7

About Frontiers

Frontiers is more than just an open-access publisher of scholarly articles: it is a pioneering approach to the world of academia, radically improving the way scholarly research is managed. The grand vision of Frontiers is a world where all people have an equal opportunity to seek, share and generate knowledge. Frontiers provides immediate and permanent online open access to all its publications, but this alone is not enough to realize our grand goals.

Frontiers Journal Series

The Frontiers Journal Series is a multi-tier and interdisciplinary set of open-access, online journals, promising a paradigm shift from the current review, selection and dissemination processes in academic publishing. All Frontiers journals are driven by researchers for researchers; therefore, they constitute a service to the scholarly community. At the same time, the Frontiers Journal Series operates on a revolutionary invention, the tiered publishing system, initially addressing specific communities of scholars, and gradually climbing up to broader public understanding, thus serving the interests of the lay society, too.

Dedication to Quality

Each Frontiers article is a landmark of the highest quality, thanks to genuinely collaborative interactions between authors and review editors, who include some of the world's best academicians. Research must be certified by peers before entering a stream of knowledge that may eventually reach the public - and shape society; therefore, Frontiers only applies the most rigorous and unbiased reviews.

Frontiers revolutionizes research publishing by freely delivering the most outstanding research, evaluated with no bias from both the academic and social point of view. By applying the most advanced information technologies, Frontiers is catapulting scholarly publishing into a new generation.

What are Frontiers Research Topics?

Frontiers Research Topics are very popular trademarks of the Frontiers Journals Series: they are collections of at least ten articles, all centered on a particular subject. With their unique mix of varied contributions from Original Research to Review Articles, Frontiers Research Topics unify the most influential researchers, the latest key findings and historical advances in a hot research area! Find out more on how to host your own Frontiers Research Topic or contribute to one as an author by contacting the Frontiers Editorial Office: researchtopics@frontiersin.org

SCHOOL ATTENDANCE AND PROBLEMATIC SCHOOL ABSENTEEISM IN YOUTH

Topic Editors:

Christopher Kearney, University of Nevada, Las Vegas, United States

Carolina González, University of Alicante, Spain

David Heyne, Leiden University, Netherlands

Citation: Kearney, C., González, C., Heyne, D., eds. (2021). School Attendance and Problematic School Absenteeism in Youth. Lausanne: Frontiers Media SA.
doi: 10.3389/978-2-88966-321-7

Table of Contents

- 05 Editorial: School Attendance and Problematic School Absenteeism in Youth**
Christopher A. Kearney, David Heyne and Carolina González
- 08 School Refusal and Absenteeism: Perception of Teacher Behaviors, Psychological Basic Needs, and Academic Achievement**
Pina Filippello, Caterina Buzzai, Sebastiano Costa and Luana Sorrenti
- 17 The Joint Effect of Paternal and Maternal Parenting Behaviors on School Engagement Among Chinese Adolescents: The Mediating Role of Mastery Goal**
Juan Wang, Xinxin Shi, Ying Yang, Hong Zou, Wenjuan Zhang and Qunxia Xu
- 31 Child and Adolescent Social Adaptive Functioning Scale: Factorial Invariance, Latent Mean Differences, and Its Impact on School Refusal Behavior in Spanish Children**
Carolina González, Cándido J. Inglés, Ainhoa Martínez-Palau, Ricardo Sanmartín, María Vicent and José M. García-Fernández
- 41 Latent Class Analysis of School Refusal Behavior and Its Relationship With Cyberbullying During Adolescence**
B. Delgado, M. C. Martínez-Monteagudo, C. Ruiz-Esteban and E. Rubio
- 50 Residential Mobility Among Elementary School Students in Los Angeles County and Early School Experiences: Opportunities for Early Intervention to Prevent Absenteeism and Academic Failure**
Gabrielle Green, Amelia DeFosset and Tony Kuo
- 63 Residential Mobility, Family Structure, and Completion of Upper Secondary Education – A Registry-Based Cohort Study of the Norwegian Adolescent Population**
Tommy Haugan and Arnhild Myhr
- 73 Reconciling Contemporary Approaches to School Attendance and School Absenteeism: Toward Promotion and Nimble Response, Global Policy Review and Implementation, and Future Adaptability (Part 1)**
Christopher A. Kearney, Carolina González, Patricia A. Graczyk and Mirae J. Fornander
- 89 Erratum: Reconciling Contemporary Approaches to School Attendance and School Absenteeism: Toward Promotion and Nimble Response, Global Policy Review and Implementation, and Future Adaptability (Part 1)**
Frontiers Production Office
- 90 Family Environment Variables as Predictors of School Absenteeism Severity at Multiple Levels: Ensemble and Classification and Regression Tree Analysis**
Mirae J. Fornander and Christopher A. Kearney
- 99 Reconciling Contemporary Approaches to School Attendance and School Absenteeism: Toward Promotion and Nimble Response, Global Policy Review and Implementation, and Future Adaptability (Part 2)**
Christopher A. Kearney, Carolina González, Patricia A. Graczyk and Mirae J. Fornander

- 113 ***Measuring School Absenteeism: Administrative Attendance Data Collected by Schools Differ From Self-Reports in Systematic Ways***
Gil Keppens, Bram Spruyt and Jonas Dockx
- 123 ***Policy With an Asterisk: Understanding How Staff in Alternative School Settings Negotiate a Mandatory Attendance Policy to Meet the Needs of Their Students***
Anton Birioukov-Brant and Kiera Brant-Birioukov
- 135 ***Rapid Return for School Refusal: A School-Based Approach Applied With Japanese Adolescents***
Naoki Maeda and David Heyne
- 148 ***Migrant Parents of Adolescents With School Refusal: A Qualitative Study of Parental Distress and Cultural Barriers in Access to Care***
Lucie Rosenthal, Marie Rose Moro and Laelia Benoit
- 162 ***Internalizing Symptoms as Predictors of School Absenteeism Severity at Multiple Levels: Ensemble and Classification and Regression Tree Analysis***
Mirae J. Fornander and Christopher A. Kearney
- 170 ***A Change in the Frame: From Absenteeism to Attendance***
Carolyn Gentle-Genitty, James Taylor and Corinne Renguette on behalf of the Student Researchers
- 176 ***School Refusal or Truancy? A Qualitative Study of Misconceptions Among School Personnel About Absenteeism of Children From Immigrant Families***
Robin Martin, Jean Pierre Benoit, Marie Rose Moro and Laelia Benoit
- 192 ***Corrigendum: School Refusal or Truancy? A Qualitative Study of Misconceptions Among School Personnel About Absenteeism of Children From Immigrant Families***
Robin Martin, Jean Pierre Benoit, Marie Rose Moro and Laelia Benoit
- 193 ***Feasibility Study of Back2School, a Modular Cognitive Behavioral Intervention for Youth With School Attendance Problems***
Johanne Jeppesen Lomholt, Daniel Bach Johnsen, Wendy K. Silverman, David Heyne, Pia Jeppesen and Mikael Thastum
- 208 ***The Mediator Role of Academic Resilience in the Relationship of Anxiety Sensitivity, Social and Adaptive Functioning, and School Refusal With School Attachment in High School Students***
İsmail Seçer and Sümeyye Ulaş
- 220 ***The Association Between Symptoms of Depression and School Absence in a Population-Based Study of Late Adolescents***
Kristin G. Askeland, Tormod Bøe, Astri J. Lundervold, Kjell M. Stormark and Mari Hysing
- 232 ***Dropping Out of School: Explaining How Concerns for the Family's Social-Image and Self-Image Predict Anger***
Nicolay Gausel and David Bourguignon
- 239 ***A Scoping Review of Constructs Measured Following Intervention for School Refusal: Are We Measuring Up?***
David Heyne, Johan Strömbeck, Katarina Alanko, Martin Bergström and Robin Ulriksen



Editorial: School Attendance and Problematic School Absenteeism in Youth

Christopher A. Kearney^{1*}, David Heyne² and Carolina González³

¹ Department of Psychology, University of Nevada, Las Vegas, NV, United States, ² Institute of Psychology, Leiden University, Leiden, Netherlands, ³ Department of Developmental Psychology and Didactics, Universidad de Alicante, San Vicente del Raspeig, Alicante, Spain

Keywords: school attendance, school absenteeism, truancy, school attendance problems, school dropout

Editorial on the Research Topic

School Attendance and Problematic School Absenteeism in Youth

Children who attend school regularly, and adolescents who complete high school, are more likely to experience better quality of life and achieve greater success at social, academic, occupational, and other aspects of functioning during their lifespan than youth who receive little education. School attendance is thus a key foundational competency for young people. Youth who do not attend school on a regular basis, or who prematurely leave school before graduation, are also at risk for myriad economic and related drawbacks in adulthood.

School attendance, absenteeism, and related constructs such as truancy and school dropout have been studied historically by professionals in many disciplines that include education, psychology, social work, medicine, nursing, sociology, and criminal justice, among others. These professionals have assembled a rich, if sometimes disparate, set of research findings on this population, as well as assessment and intervention strategies. The field continues to evolve toward common theories, constructs, and strategies to encompass all youth with school attendance problems.

School attendance and problematic school absenteeism are important areas of study particularly in education as well as clinical and health psychology. These constructs are important in education due to linkage to lower academic performance and achievement, lower reading and mathematics test scores, fewer literacy skills, grade retention, and dropout. These constructs are also important in clinical and health psychology due to linkage to psychiatric disorders (particularly anxiety and depression), social isolation, internalizing and externalizing behavior problems, involvement with the juvenile justice system, and long-term issues in adulthood that include psychiatric, occupational, and marital problems as well as economic deprivation. Indeed, school absenteeism and school dropout are often considered critical public health issues.

The primary goal of this Research Topic was to disseminate state-of-the-art theory and research and empirically supported practices relevant to mental health, school-based, and other professionals worldwide who address youth with school attendance problems. A secondary goal of this Research Topic was to enhance consensus among varied professionals regarding definition, classification, etiology, assessment, and intervention for school attendance problems that can be useful worldwide and that can serve as a foundation for future research and clinical work in this area. As such, multidisciplinary articles that can help bridge gaps in understanding and addressing this important population, and that have particular relevance to school districts, populate this special series.

Several articles in the Research Topic focus on issues regarding definition and classification of school attendance problems. Kearney et al. (a) and Kearney et al. (b) provide a review and critique of categorical and dimensional approaches to defining and conceptualizing school attendance

OPEN ACCESS

Edited and reviewed by:

Jesus de la Fuente,
University of Navarra, Spain

*Correspondence:

Christopher A. Kearney
chris.kearney@unlv.edu

Specialty section:

This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Psychology

Received: 02 September 2020

Accepted: 19 October 2020

Published: 06 November 2020

Citation:

Kearney CA, Heyne D and
González C (2020) Editorial: School
Attendance and Problematic School
Absenteeism in Youth.
Front. Psychol. 11:602242.
doi: 10.3389/fpsyg.2020.602242

problems with an eye toward reconciling these approaches. The researchers provide a roadmap for possible future avenues with respect to early warning systems, preventative and intervention strategies, and adaptations to future changes in education and technology, among other domains. The authors also provide a first glimpse of a multidimensional multi-tiered system of supports pyramid model as a potential mechanism for reconciliation in this complex and fragmented field.

Other articles in the Research Topic also outline particular challenges to, and suggestions for, defining and conceptualizing school attendance problems. Keppens et al. report a weak association between self-reported unauthorized school absenteeism and registered unauthorized school absenteeism, particularly for certain demographic, academic, and family groups in Flanders. The researchers note that reliable and valid identification and detection systems for school attendance problems must properly account for mismatches in data sources. Gentle-Genitty et al. recommend a change in how we frame student absenteeism to better leverage attendance data toward proactive student support. Many students are disproportionately affected and harmed by school absenteeism policies that are not effective. Instead, attendance-focused tracking and skills building can improve teacher engagement and foster a positive school environment to convey to students that their attendance is valued. Birioukov-Brant and Brant-Birioukov provide detailed feedback from Canadian educators about their personal challenges with respect to balancing exceptional circumstances (abuse, poverty, violence, mental health problems) faced by many of their students vis-à-vis rigid school attendance policies. Staff members see how attendance policies marginalize their students and are thus unwilling to fully comply with these mandates, often forming their own *de facto* policies. The study illustrates further the pitfalls of a one-size-fits-all approach to school attendance problems.

Several articles in the Research Topic also focus on contextual and risk factors that contribute to the emergence of school attendance problems. Contextual risk factors for school attendance problems are sometimes categorized across youth, parent, family, peer, school, and broader community domains. Several of these domains are represented throughout this special series and help advance the field by providing particularly nuanced findings.

Within the youth domain, Askeland et al. expand on the well-established relationship between depression and school attendance problems by examining these issues along a continuum, based on a large sample of Norwegian adolescents. The researchers find that symptoms of depression were evident even at low levels of school absences and that the relationship between depressive symptoms and school absences was partially mediated by sleep duration. These findings have important implications for preventative or Tier 1 strategies for this population. In addition, Fornander and Kearney (a) investigate internalizing symptoms in American youth across various absenteeism severity levels using ensemble and classification and regression tree analysis. Lack of enjoyment at school, a key depressive symptom, was predictive of several levels of absenteeism, and worry and fatigue were more evident across

less severe and more severe absenteeism severity levels. These findings also have ramifications for universal and early screening for youth with potential school attendance problems.

Several articles in the Research Topic focus as well on parent and family variables that impact school attendance problems. Fornander and Kearney (b) examine family environment variables for American youth across different levels of absenteeism severity. Higher levels of absenteeism were more closely related to lower achievement orientation, active-recreational orientation, cohesion, and expressiveness. Interestingly, family conflict was elevated at 5% absenteeism but lower at 10% absenteeism, suggesting that some families may eventually become frustrated and disengaged from attempting to solve a child's school attendance problem. Gausel and Bourguignon also look at perceived family anger with respect to Norwegian students dropping out of school. The authors find that former students expect their family members to be angrier at them for leaving vocational education than general education. Family members may be especially upset about the possibility of the student being ill-prepared for an increasingly competitive labor market. Wang et al. delve even deeper into the nuances of parenting and family environment among Chinese families, finding intricate patterns related to school engagement, a key predictor of absenteeism. Maternal and paternal behaviors had an interactive effect; dual emotional warmth and behavioral guidance were related to stronger school engagement and dual harsh discipline was related to weaker school engagement. Student motivation toward mastery of academic material mediated these relationships. The researchers note that parents in China often deliberately convey different attitudes to their offspring but that a more positive and collaborative parenting approach may be best.

Other contextual risk factors for school attendance problems include peer-oriented variables. Delgado et al. examine cyberbullying profiles across maintaining variables of school attendance problems in Spanish adolescents, finding that anxiety-based variables were related to enhanced victimization, aggression, aggression-victimization, and observation behaviors. Bullying is closely related to school attendance problems and this study advances the field by extending results to the virtual world and by illustrating the need for expanded prevention efforts. In addition, González et al. evaluate the psychometric qualities of the Spanish version of the Child and Adolescent Social Adaptive Functioning Scale. Social functioning was found to be a protective factor against anxiety-based school refusal behaviors but not for pursuing tangible reinforcements outside the school setting. Both studies support the need to better understand peer influences on school attendance problems, an under researched domain in this population.

School-related factors are also examined in some articles in the Research Topic. Filippello et al. examine Italian student satisfaction and frustration at school vis-à-vis perceived teacher support. Student satisfaction was positively predicted by perceived teacher support and negatively predicted by perceived teacher psychological control, and student frustration was positively predicted by teacher perceived psychological control. These effects had impacts on student absences as well.

The researchers note the importance of advocating supportive teaching practices such as paying attention to student needs and modifying dysfunctional instructional styles. Seer and Ulař find in Turkish students that academic resilience mediates a relationship between anxiety sensitivity and school attachment and partially mediates a relationship between social and adaptive functioning and school absenteeism and attachment. The researchers note the protective aspect of academic resilience and advocate for broadening holistic and causal models for school attachment and problematic school absenteeism.

Several articles in the Research Topic also focus on broader community issues, most notably those related to migrant and immigration status. Rosenthal et al. interview 11 parents of teenagers with school attendance problems in Paris and find that many confront systemic challenges following migration. These challenges include mistrust and disappointment in the inequalities and racism evident in schools and healthcare systems. These broader challenges affect family abilities to engage in cultural blending and cause parents to rethink their views of parenthood. Martin et al. likewise interview school personnel to illustrate the challenges of assimilating students of transcultural backgrounds into schools with a French universalist ideology. The researchers note some successes as school personnel navigate these challenges but also advocate for developing transcultural training for professionals working with students with such backgrounds who have school attendance problems.

Residential mobility is another broader community variable closely related to school attendance problems. Green et al. report that more than one-third of students in their American sample moved at least once in the past year. A greater number of moves led to less school connectedness and perceived academic ability as well as to more violence and harassment as a victim and as a perpetrator. The researchers note the value of strategies that can identify and support students who move at a young age in order to prevent student disengagement and promote attendance and academic success early in their life trajectory. Haugan and Myhr examine Norwegian adolescents and their families along four main groups that intersect poorly educated and well-educated families and non-intact and intact families. Students that did not complete secondary education were more likely to have a greater number of residential changes, but this effect was particularly evident among poorly educated, intact families and especially among poorly educated families *per se*. The researchers advocate for efforts to improve intergenerational educational mobility to promote stable and sustainable life situations for vulnerable families.

Several articles in the Research Topic also focus on intervention aspects for youth with school attendance problems. Maeda and Heyne report on a rapid return to school approach for Japanese youth with attendance problems that is implemented by school staff members. A significant percentage (72%) of intervention cases were classified as treatment responders and 89% of these cases demonstrated a return to school in 1 week.

The researchers note the cost-effectiveness of this approach and the fact that it can bypass a student who is resistant to traditional clinical care. They also discuss the indications and contra-indications for using the approach. Lomholt et al. report on a feasibility study for Back2School, a manual-based, modular transdiagnostic cognitive behavioral intervention used with Danish youth with school attendance problems. This intervention is designed to address a wide array of behavioral issues in addition to school attendance problems. Initial outcomes of the feasibility study revealed a significant increase in school attendance and decrease in psychological symptoms, as well as a significant increase in youth and parent self-efficacy. Subsequent adaptations included greater school consultation, broader recruitment methods, and an increase in staffing by psychologists because of the time required to deliver the intervention. Heyne et al. provide a review of constructs measured following intervention for school refusal to inform guidelines for outcome measurement in future treatment studies. Many studies in this area have focused heavily on attendance as well as measures of emotional and behavioral symptoms, global functioning, self-efficacy, and diagnosis, among other aspects. The researchers provide guidelines for direction in this area that include accurate school attendance data, measures with strong psychometric properties, comparable measures across studies, uniform time-points for assessment, consistent outcome criteria, and multiple stakeholders that report on outcome intervention.

We are deeply grateful to all of the researchers and authors that contributed to this Research Topic. We are particularly delighted by diverse representation from so many different countries. The articles illustrate the substantial complexity of this population and the intense challenges faced by those who try to solve school attendance problems. The articles further demonstrate the need for input from multiple perspectives, disciplines, agencies, and parties to address the wide array of contextual risk factors endemic to school absenteeism. We hope this series of articles serves as a springboard for enhanced definition, classification, etiologic, assessment, and intervention frameworks for this critical public health issue.

AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2020 Kearney, Heyne and González. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



School Refusal and Absenteeism: Perception of Teacher Behaviors, Psychological Basic Needs, and Academic Achievement

Pina Filippello¹, Caterina Buzzai^{2*}, Sebastiano Costa³ and Luana Sorrenti^{1*}

¹ Department of Clinical and Experimental Medicine, University of Messina, Messina, Italy, ² Department of Cognitive Sciences, Psychological, Educational and Cultural Studies, University of Messina, Messina, Italy, ³ Department of Psychology, University of Campania "Luigi Vanvitelli", Caserta, Italy

OPEN ACCESS

Edited by:

Carolina González,
University of Alicante, Spain

Reviewed by:

Maria Vicent,
University of Alicante, Spain
Caterina Fiorilli,
LUMSA University, Italy

*Correspondence:

Caterina Buzzai
cbuzzai@unime.it
Luana Sorrenti
sorrentil@unime.it

Specialty section:

This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Psychology

Received: 05 March 2019

Accepted: 11 June 2019

Published: 27 June 2019

Citation:

Filippello P, Buzzai C, Costa S and
Sorrenti L (2019) School Refusal
and Absenteeism: Perception
of Teacher Behaviors, Psychological
Basic Needs, and Academic
Achievement.
Front. Psychol. 10:1471.
doi: 10.3389/fpsyg.2019.01471

School refusal (SR) is a complex problem that may be caused by different risk factors such as individual and contextual factors (Kearney, 2007; Maynard et al., 2018; Heyne et al., 2019). These mechanisms can be described in the context of self-determination theory (SDT). For these reasons, the purpose of the present study is investigate the relationship between teacher perceived psychological control and support, psychological basic needs, SR behavior, and academic achievement, on adolescent sample. It is hypothesized that teacher perceived psychological control and autonomy support play a role on need frustration and need satisfaction; in turn, need satisfaction could reduce while need frustration could promote SR behavior and number of absences. Finally, SR behavior and number of absences could reduce academic achievement. 263 students (196 females, 67 males) with an average age of 16.14 (SD = 1.35; range 13–20 years). SEM analyses with observed variables have shown that the final model fit well the data, $\chi^2(8) = 16.34$, $p = 0.04$, CFI = 0.96, SRMR = 0.04, RMSEA (90% CI) = 0.06 (0.01; 0.10), showing the following significant path: need satisfaction was positively predicted by perceived teacher support and negatively predicted by teacher perceived psychological control; need frustration was positively predicted by teacher perceived psychological control; number of absences was negatively predicted by need satisfaction; SR was positively predicted by need frustration; school achievement was negatively predicted by SR and number of absences. These results have several implications for the school context and the deepening of the construct of SR and absenteeism.

Keywords: school refusal, self-determination theory, psychological basic needs, absenteeism, teacher perceived psychological control, perceived teacher support

INTRODUCTION

In accordance with the Functional Model of School Refusal Behavior (Kearney, 2008; Kearney and Spear, 2014), *school refusal* (SR) can be defined as a school attendance problem that manifests in various ways, such as: not attending school for a long time; not staying in class all the time; arriving late to school; and students attending school only because they are forced to by their parents (Kearney and Albano, 2010). SR differs from other school attendance problems (e.g., truancy,

school withdrawal, or school exclusion) due to some of its specific characteristics: (a) students show reluctance to attend school and resistive behavior when parents try to get them to attend; (b) students stay at home when not attending school, and the parents know about it; (c) school causes these students emotional distress, such as somatic complaints and anxiety; and (d) students do not exhibit antisocial behavior (Heyne et al., 2019; Ingul et al., 2019).

The Functional Model of School Refusal Behavior describes four main reasons why children develop SR (Kearney, 2008; Kearney and Spear, 2014): (a) to avoid general school-related distress caused by known or unknown factors (i.e., school is where they experience feelings of rejection or shame); (b) to escape from adverse social situations and/or the school evaluation system (i.e., unstructured circumstances, group work, writing on the board); (c) to draw the attention of parents (i.e., children have non-compliance, escape, or physical symptoms that occur at home to avoid separation); and (d) to obtain gratification out of school. In this last case, the refusal relates specifically to the possibility of continuing pleasant experiences perceived as more rewarding than attending school, such as watching television or hanging out with friends.

In the study of SR, one must take into account individual and contextual factors, and self-determination theory (SDT) (Deci and Ryan, 2000; Vansteenkiste et al., 2010; Ryan and Deci, 2017) proves useful for analyzing the interaction of these factors. In accordance with SDT, the individual's effective functioning depends on the satisfaction of three fundamental psychological needs – autonomy, relatedness, and competence – and SDT contends that the interpersonal context plays a fundamental role in satisfying these needs. The interpersonal context can be defined as either controlling or supportive depending on whether it contributes to the satisfaction or, conversely, to the frustration of psychological needs (Vansteenkiste et al., 2010; Ryan and Deci, 2017; Costa et al., 2019). For example, support from significant adults (parents and teachers) is essential for the satisfaction of basic psychological needs; conversely, harsh educational practices may thwart these needs (Costa et al., 2016; Ryan and Deci, 2017; Filippello et al., in press).

An undoubtedly dysfunctional educational practice is psychological control, which involves intrusive practices that rely on the manipulation of youths' psychological and emotional states (Soenens and Vansteenkiste, 2010). Psychological control is considered a destructive form of control, rendering young people vulnerable to ill-being (Barber, 1996; Rogers et al., 2003).

Despite literature demonstrating that all types of psychological control (whether by parents or teachers) are positively associated with school maladjustment and underachievement (Filippello et al., 2015, 2018a), teacher control seems to play a more significant role in the development of feelings of incompetence, helplessness, and frustration in attempting school tasks (Filippello et al., 2014, 2017; Sorrenti et al., 2018).

Psychologically controlling teachers adopt covert behaviors (e.g., the induction of guilt, limiting overt verbal expression, hindering the critical and independent views of the students, exhibiting disapproval, or ignoring students who do not reach or do not behave according to their standards) to manipulate their

students and ensure compliance with their directives (Soenens et al., 2012; Filippello et al., 2019). In accordance with SDT, teachers' psychological control can hinder the satisfaction of psychological needs, encouraging an external locus of motivation rather than intrinsic motivation (Reeve et al., 2004; Reeve and Jang, 2006; Filippello et al., 2019). Psychological teaching control produces, in fact, a learning context characterized by control, obligation, and coercion, eliciting in the students shame, guilt, anxiety (Soenens et al., 2012), insecurity, and fear of failure (Ryan et al., 1992; Filippello et al., 2017). Several studies have found that the negative emotions arising from perceived controlling teaching related, in turn, to low school engagement, less use of learning strategies, and lower grades (Assor et al., 2005; Reeve, 2009; Soenens et al., 2012; Filippello et al., 2017).

On the contrary, teachers who create a supportive learning environment pay attention to their students' points of view and needs, encourage conversation, and make use of praise as informational feedback, encouragement, and hints on ways to improve. These methods favor higher levels of interest, intrinsic motivation, the formation of an internal locus of control, self-efficacy, and commitment among the students, because they support the self-realization of students' goals (Ryan et al., 1992; Reeve et al., 2004; Reeve and Jang, 2006; Filippello et al., 2019).

The literature shows that supportive student-teacher relationships can play a protective role, thus alleviating the onset of stress in young people (Murberg and Bru, 2009). Conversely, problematic student-teacher relationships could promote stress, depression (Fiorilli et al., 2019) and negative emotions toward school, resulting in feelings of frustration and helplessness (Sorrenti et al., 2015a,b). Therefore, these negative relationships and related consequences could also represent a risk factor for SR (Ingul et al., 2019). However, although several studies have identified a relationship between SR and a lack of teacher support, fear of the teacher (Havik et al., 2015), and conflict with teachers (Baker and Bishop, 2015), the link between SR and the perceived exertion of psychological control by teachers has not been investigated sufficiently. The literature shows that teachers' psychological controlling behavior usually rewards students who satisfy their high expectations and achieve excellent results (Filippello et al., 2017). Therefore, such behavior can induce a sense of guilt and shame in students who fail to achieve high standards, a situation that could frustrate the three basic psychological needs and create a sense of helplessness in the students. Consequently, school could become a source of frustration, and lead students to avoidance behavior and to the onset of SR. Therefore, it would be suitable to implement studies to verify whether the teacher perceived psychological control, frustrating the basic psychological needs, can favor SR. Indeed, it has been observed that teacher perceived psychological control, through the mediating role of other variables (e.g., helplessness) is a predictor of academic underachievement (Filippello et al., 2019).

Most students with SR do not attend school, and the increase in absences has an effect on learning and academic achievement (Heyne et al., 2019; Ingul et al., 2019). Many studies have shown the link between SR and poor academic performance (Barry et al., 2010; Yahaya et al., 2010; Thornton et al., 2013).

Furthermore, students with SR are more frequently exposed to the risk of presenting external behavioral problems or emotional maladjustments (Maynard et al., 2012; Nelemans et al., 2014). The early identification of individuals with SR is very important for the prevention of the negative consequences of SR behaviors, such as dropping out of school (González et al., 2018).

The Present Study

The studies mentioned above demonstrate that teachers' psychological control could contribute to the development of SR. However, although the literature has shown that the lack of support from teachers is a risk factor in SR development (Havik et al., 2015), there is a dearth of research on the mediating role of the student's perception of teacher psychological control in SR, and its relationship with academic achievement.

For these reasons, the purpose of the present study is to investigate the mediating role of need satisfaction and need frustration at school in the relationship between student's perception of teacher control and teacher support, SR behavior (as global score and four functional conditions: Avoidance, Escape, Attention-seeking, and Gratification), number of absences, and the impact on academic achievement in an adolescent sample. It is hypothesized that student's perception of teacher control and teacher support play a role in need frustration and need satisfaction; need satisfaction could decrease SR behavior (both the global score and the single conditions), while need frustration could promote it, and increase absences. Furthermore, SR behavior and the number of absences could reduce academic achievement. Finally, it was hypothesized the mediation role of need satisfaction and need frustration in the association between the student's perception of teacher control/support and SR behavior/number of absence and, also the mediation role of need satisfaction/frustration and SR behavior/number of absence in the association between the student's perception of teacher control/support and academic achievement.

MATERIALS AND METHODS

Participants

The sample consisted of 263 students – 196 females (74.5%) and 67 males (25.5%) – with an average age of 16.14 (SD = 1.35; range 13–20 years). Participants were selected from a high school in Messina with various orientations of study (linguistic, scientific, classical, artistic, social sciences), Sicily (Italy), through a random sampling procedure. 95.4% of the students were Italian, and all were Italian speaking. Furthermore, 15.2% of the students had low socioeconomic status (SES) (one or both parents held a lower secondary education diploma), 43.7% had medium SES (one or both parents held a high school diploma), and 41.1% had high SES (one or both parents held a university degree).

Instruments

In this study, some of the scales employed have been adapted in Italian. According to the recommendations of the International Test Commission (Hambleton, 2001), the

Italian versions of the *Teacher as Social Context Questionnaire*, *Psychological Control Teaching Scale–Student Report* and *The Basic Psychological Need Satisfaction and Frustration Scale for the school context* were adapted using the back-translation method. The questionnaires were adapted from English to Italian by three independent translators, expert in the SDT. Each translator translated the measures from English to Italian and successively they discussed all the discrepancies identified until finding a satisfactory solution. This procedure from Italian to English proved to be identical in content with the three questionnaires original versions.

The *Demographic Questionnaire* was administered to collect basic demographic information from the participants, including age, gender, national origin, educational level/academic class, and SES.

An adapted version of the *Teacher as Social Context Questionnaire* (TASCQ; Belmont et al., 1988) was used to assess students' perceived need of teacher support. We used the five positively worded items from the TASCQ on autonomy support (e.g., “My teacher gives me a lot of choices about how I do my schoolwork”). Participants responded on a 5-point Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Scale scores were computed as the means of the items. The reliability and validity of this scale have been documented in several countries (Aelterman et al., 2014; Haerens et al., 2015).

The *Psychological Control Teaching Scale–Student Report* (PCTS–SR; Soenens et al., 2012) was used to evaluate the student's perception of teacher psychological control. The scale consists of seven items (e.g., “My teacher clearly shows that I have hurt their feelings when I have failed to live up to their expectations”) and the participants responded on a 5-point Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Scale scores were computed as the means of the items. Soenens et al. (2012) provided evidence for the validity of this scale, and the reliability has been documented in different countries, including Italy (Filippello et al., 2017, 2019).

An adapted version of *The Basic Psychological Need Satisfaction and Frustration Scale* (BPNSFS; Costa et al., 2018) for the school context was used in this study. It contains 24 items assessing the student's perception of satisfaction (12 items; e.g., “I feel a sense of choice and freedom in the things I undertake at school”) and frustration (12 items; e.g., “At school, I feel forced to do many things I wouldn't choose to do”) relating to psychological needs in the school context. Participants responded on a 5-point Likert scale ranging from 1 (completely disagree) to 5 (completely agree). For this study, the total average of the items was computed to obtain two scores – Need Satisfaction at School and Need Frustration at School. The reliability and validity of BPNSFS have been documented in different countries (Chen et al., 2015; Cordeiro et al., 2016; Liga et al., 2018).

The *number of absences* was based on the total number of absences by the students during the school year in question (from September to April).

The *School Refusal Behavior Scale–Revised* – SRAS (Kearney, 2007), specifically the Italian version by Rigante and Patrizi (2007), was used to evaluate a student's risk of SR behavior. This consists of 24 items rated on a 7-point Likert-type scale

ranging from 0 (never) to 6 (always). The scale measures four functional dimensions: avoidance of negative affectivity-provoking stimuli or situations related to a school setting (e.g., “How often do you have trouble going to school because you are afraid of something in the school building, for example teacher, school bus, etc.?”); escape from aversive, social, or evaluative situations (e.g., “Do you have trouble speaking with the other kids at school?”); attention-seeking behavior (e.g., “Do you often do things to upset or annoy your family?”); and positive tangible reinforcement/gratification (e.g., “Do you ever skip school because it’s more fun to be out of school?”). For this study, scores for each sub-scale were computed as the means of items and the SR total score average was computed. The reliability and validity of this scale have been documented in different countries (Rigante and Patrizi, 2007; Kearney and Albano, 2010; Sorrenti et al., 2016; Filippello et al., 2018b, 2019).

Academic Achievement

The data on academic achievement were provided by the students based on the average scores earned on written tests and oral questions across all subjects during the school year in question.

Procedure

This study was carried out in accordance with the recommendations of the Ethical Code of the Italian Association of Psychology (AIP), with written informed consent from all subjects. All subjects gave written informed consent in accordance with the Declaration of Helsinki (2013). The protocol was approved by the Ethics Committee of the Centre for Research and Psychological Intervention (CERIP) of the University of Messina (protocol number: 30465). Approval from the school was requested and received to conduct the study. Furthermore, all of the students were given informed consent to take part in the research. Written informed consent was obtained from the parents of all the participants in this study. Data collection took place in April, 7 months after the start of the school year. Participants completed all of the questionnaires in a single session lasting 20–30 min. Academic achievement and number of absences data were provided by students using online access to the school register. Privacy and the anonymity of their answers were guaranteed.

Data Analysis

RStudio with the lavaan package was used to carry out the path analysis with maximum likelihood estimation and 5000 resample of bootstrapped estimates. Several indexes of fit were examined: the Chi-square (χ^2) value; the Comparative Fit Index (CFI); Standardized Root Mean Square Residual (SRMR) and the Root Mean Square Error of Approximation (RMSEA) with its 90% confidence interval (CI) (for a description of these indices, see Hair et al., 1998). Cut-off for a good model fit is achieved when the CFI values is >0.90 , the SRMR and the RMSEA are <0.08 (Kline, 2015). IBM SPSS was used to conduct descriptive statistics, Cronbach’s alpha, and correlations for all variables in the study.

RESULTS

Descriptive Statistics, Reliability, and Correlation

Table 1 shows means, standard deviation, skewness, kurtosis, Cronbach’s alpha values for all measures considerate in this study. The descriptive analysis showed that all scales had good scores for symmetry and kurtosis, and the reliability of the measures was adequate. Mardia’s coefficients for multivariate skew ($b1p = 4.74$) and kurtosis ($b2p = 72.44$) revealed that the data departed significantly from multivariate normality and to account for multivariate non-normality of the data, the maximum likelihood estimation with bootstrapped resamples approach was used. Correlations showed that the avoidance was positively correlated with need frustration, teacher perceived psychological control and number of absences, while it was negatively related with need satisfaction and perceived teacher support; escape was positively related with need frustration, teacher perceived psychological control and number of absences, while it was negatively correlated with need satisfaction and academic achievement; attention-seeking was positively related with need frustration and teacher perceived psychological control, while it was negatively correlated with academic achievement; gratification wasn’t related with any of the variables considered.

Furthermore, correlational analysis showed that the SR was positively related with need frustration, teacher perceived psychological control, and number of absences, while it was negatively correlated with need satisfaction, perceived teacher support, and academic achievement.

Path Analyses

To investigate the mediating role of need satisfaction and need frustration at school in the relationship between teacher perceived psychological control and support, SR behavior (as global score and for the four functional conditions: Avoidance, Escape, Attention-seeking, and Gratification), number of absences, and the impact on academic achievement, two path analyses were employed. In the first path analyses the global score of the SR behavior was used, while in the second path analyses the four functional conditions: Avoidance, Escape, Attention-seeking, and Gratification were used as conceptualization of the SR behavior. In model 1 was tested a model using the following paths: Need Satisfaction at School and Need Frustration at School predicted by Perceived Teacher Support and Teacher Perceived Psychological Control; Number of Absences and SR predicted by Need Satisfaction at School and Need Frustration at School; School Grades predicted by Number of Absences and SR. Furthermore, in the hypothesized model, the following couples of variables were allowed to correlate with each other: Perceived Teacher Support and Teacher Perceived Psychological Control; Need Satisfaction at School and Need Frustration at School; and Number of Absences and SR.

The results from the hypothesized model (**Figure 1**) showed excellent fit indices, $\chi^2(8) = 16.34$, $p = 0.04$, CFI = 0.96, SRMR = 0.04, RMSEA (90% CI) = 0.06 (0.01; 0.10), and indicated

TABLE 1 | Descriptive statistics and correlation among variables.

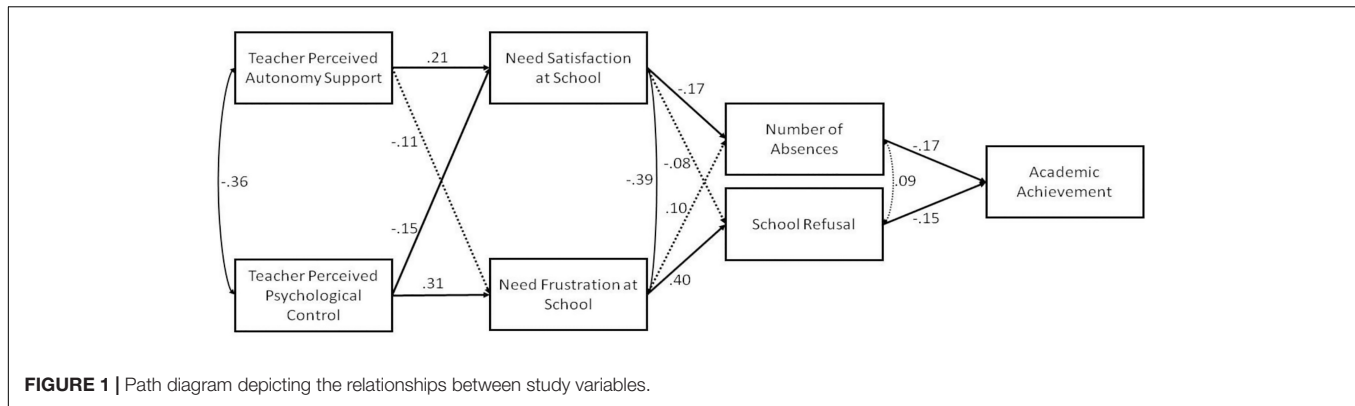
	Min	Max	M	SD	Skew	Kurt	1	2	3	4	5	6	7	8	9	10
1. Perceived teacher support	1.00	5.00	2.74	0.82	0.03	-0.28	$\alpha = 0.79$									
2. Teacher perceived psychological control	1.00	5.00	2.37	0.77	0.58	0.11	-0.36**	$\alpha = 0.78$								
3. Need satisfaction at school	1.83	4.67	3.64	0.57	-0.62	0.50	0.26**	-0.23**	$\alpha = 0.81$							
4. Need frustration at school	2.71	3.29	2.88	0.12	0.88	0.52	-0.22**	0.35**	-0.44**	$\alpha = 0.82$						
5. Avoidance	0.17	5.50	2.65	1.24	0.08	-0.67	-0.24**	0.41**	-0.29**	0.45**	$\alpha = 0.76$					
6. Escape	0.00	6.00	1.01	1.00	1.76	4.30	-0.02	0.22**	-0.32**	0.47**	0.41**	$\alpha = 0.72$				
7. Attention-seeking	0.00	5.50	1.82	1.26	0.68	-0.25	-0.02	0.17**	-0.10	0.24**	0.50**	0.46**	$\alpha = 0.81$			
8. Gratification	0.33	5.33	3.01	1.05	-0.18	-0.44	-0.04	0.10	0.02	0.00	0.11	0.02	0.08	$\alpha = 0.60$		
9. School refusal	0.67	4.83	2.12	0.77	0.70	0.45	-0.13*	0.34**	-0.26**	0.43**	0.78**	0.69**	0.79**	0.42**	$\alpha = 0.82$	
10. Number of absences	0.00	34.00	11.08	5.84	0.72	0.69	-0.07	0.11	-0.21**	0.17**	0.19**	0.14*	0.09	0.01	0.16**	-
11. Academic achievement	5.00	9.50	7.35	0.81	-0.07	0.73	0.05	-0.02	0.14*	-0.13*	-0.12	-0.14*	-0.17**	-0.04	-0.18**	-0.20**

N = 263; α , Cronbach's Alpha; *M*, mean; *SD*, standard deviation; *Skew*, skewness; *Kurt*, kurtosis; * $p < 0.05$; ** $p < 0.01$.

that need satisfaction was positively predicted by perceived teacher support ($b = 0.15$, 95% CIs [0.05; 0.24], $\beta = 0.21$, $p < 0.01$) and negatively predicted by teacher perceived psychological control ($b = -0.11$, 95% CIs [-0.22; -0.01], $\beta = -0.15$, $p < 0.05$); need frustration was positively predicted by teacher perceived psychological control ($b = 0.05$, 95% CIs [0.03; 0.07], $\beta = 0.31$, $p < 0.01$); number of absences was negatively predicted by need satisfaction ($b = -1.76$, 95% CIs [-3.21; -0.21], $\beta = -0.17$, $p < 0.05$); SR was positively predicted by need frustration ($b = 2.56$, 95% CIs [1.67; 3.45], $\beta = 0.40$, $p < 0.01$); academic achievement was negatively predicted by SR ($b = 0.16$, 95% CIs [-0.29; -0.03], $\beta = -0.15$, $p < 0.05$) and number of absences ($b = -0.02$, 95% CIs [-0.04; -0.01], $\beta = -0.17$, $p < 0.05$). Notably, an examination of the indirect effects showed: an indirect positive effect from teacher perceived psychological control to academic achievement via the mediation effect of need frustration at school and SR ($b = 2.45$, 95% CIs [1.57; 3.32], $\beta = 0.56$, $p < 0.01$); an indirect negative effect from teacher perceived psychological control to academic achievement via the mediation effect of need satisfaction at school and number of absences ($b = -1.89$, 95% CIs [-3.32; -0.29], $\beta = -0.50$, $p < 0.05$); and an indirect negative effect from perceived teacher support to academic achievement via the mediation effect of need satisfaction at school and number of absences ($b = -1.63$, 95% CIs [-3.03; -0.05], $\beta = -0.13$, $p < 0.05$).

In model 2 was tested a model using the following paths: Need Satisfaction at School and Need Frustration at School predicted by Perceived Teacher Support and Teacher Perceived Psychological Control; Number of Absences and Avoidance, Escape, Attention-seeking, and Gratification predicted by Need Satisfaction at School and Need Frustration at School; Academic Achievement predicted by Number of Absences and SR. Furthermore, in the hypothesized model, the following couples of variables were allowed to correlate with each other: Perceived Teacher Support and Teacher Perceived Psychological Control; Need Satisfaction at School and Need Frustration at School; and Number of Absences and Avoidance, Escape, Attention-seeking, and Gratification.

The results from the hypothesized model showed excellent fit indices, $\chi^2(14) = 39.32$, $p < 0.001$, CFI = 0.94, SRMR = 0.05, RMSEA (90% CI) = 0.08 (0.05; 0.01), and indicated that need satisfaction was positively predicted by perceived teacher support ($b = 0.15$, 95% CIs [0.05; 0.24], $\beta = 0.21$, $p < 0.01$) and negatively predicted by teacher perceived psychological control ($b = -0.11$, 95% CIs [-0.22; -0.01], $\beta = -0.15$, $p < 0.05$); need frustration was positively predicted by teacher perceived psychological control ($b = 0.05$, 95% CIs [0.03; 0.07], $\beta = 0.31$, $p < 0.01$); avoidance was positively predicted by need frustration ($b = 4.17$, 95% CIs [2.93; 5.37], $\beta = 0.40$, $p < 0.001$); escape was positively predicted by need frustration ($b = 3.49$, 95% CIs [2.27; 4.77], $\beta = 0.41$, $p < 0.001$); attention-seeking was positively predicted by need frustration ($b = 2.55$, 95% CIs [1.03; 4.08], $\beta = 0.24$, $p < 0.01$); number of absences was negatively predicted by need satisfaction ($b = -1.76$, 95% CIs [-3.22; -0.20], $\beta = -0.17$, $p < 0.05$); academic achievement was negatively predicted by number of absences ($b = -0.03$, 95% CIs [-0.04; -0.01], $\beta = -0.18$, $p < 0.05$). Furthermore, as regards the



indirect effects it has been shown: an indirect negative effect from teacher perceived psychological control to academic achievement via the mediation effect of need satisfaction at school and number of absences ($b = -1.89$, 95% CIs $[-3.39; -0.32]$, $\beta = -0.50$, $p < 0.05$); and an indirect negative effect from perceived teacher support to academic achievement via the mediation effect of need satisfaction at school and number of absences ($b = -1.64$, 95% CIs $[-3.11; -0.08]$, $\beta = -0.14$, $p < 0.05$).

DISCUSSION

School refusal is a complex issue that can be determined by different individual and contextual risk factors that interact with each other; these act as predisposing, precipitating, and/or perpetuating factors (Heyne et al., 2014; Maynard et al., 2018) that could lead to a rapid decline in school adjustment and achievement (Dembo et al., 2016; González et al., 2017, 2018).

For these reasons, the aim of this study was to investigate the mediating role of need satisfaction and need frustration at school in the relationship between teachers perceived psychological control and support, SR behavior (as global score and the four functional conditions: avoidance, escape, attention seeking, and gratification), number of absences, and the impact on academic achievement in a sample of adolescent students. Specifically, the investigation focused on whether teacher perceived psychological control and perceived teachers support contributes to the satisfaction or frustration of psychological needs at school, and subsequently predicts SR behavior (as global score and the four functional conditions: avoidance, escape, attention seeking and gratification), number of absences, and ultimately academic achievement. To achieve this goal, two models were tested. In model 1, together with the variables mentioned above, SR total score was considered, while, in model 2 the four functional conditions of SR were considered.

The results of model 1 confirmed the role of need frustration at school as a mediator between SR and teacher perceived psychological control. This suggests that the teacher perceived psychological control has a significant influence on the frustration of psychological needs at school and, therefore, is associated with increased SR behavior. According to SDT (Ryan and Deci, 2017), when the teacher adopts a control behavior

(e.g., induction of guilt, exhibiting disapproval, or ignoring students who do not reach their standards) the students may experience a sense of external or self-imposed control, doubt their ability, feel excluded from the school context, and experience shame, guilt, and anxiety (Soenens et al., 2012). Consequently, students can seek to avoid general school-related distress, escape from adverse social situations, or look for gratification outside the school (Kearney, 2008; Kearney and Spear, 2014). Furthermore, this study showed the mediating role of need satisfaction between teacher perceived psychological control and number of absences and academic achievement. This indicates that teachers' manipulation of their students to ensure compliance with their directives (Soenens et al., 2012; Cheon and Reeve, 2015) hinders the satisfaction of students' basic psychological needs at school, which in turn has a negative influence on school involvement (increasing the number of absences) and on academic achievement, consistent with previous studies (Niemiec and Ryan, 2009; Soenens et al., 2012; Cheon and Reeve, 2015). Another result to emerge from this study was the role of satisfaction at school as a mediator between number of absences and perceived teacher support. This result, again consistent with other studies (Niemiec and Ryan, 2009; Yu et al., 2015; Malu and Reddy, 2016; Molinari and Mameli, 2018), suggests that when teachers pay attention to their students' point of view, they support their need to feel free to choose, be competent, and be connected with others, thus increasing their involvement at school and reducing the number of absences.

The results of model 2 showed the same direct effects as model 1 from teacher perceived psychological control and perceived teacher support to need frustration and need satisfaction. Furthermore, a direct effect was shown from need frustration to avoidance, escape and attention-seeking but the latter did not show any significant effect on the number of absences and academic achievement. Finally, this model did not confirm the role of need frustration at school and need satisfaction as a mediator between avoidance, escape, attention-seeking, gratification and teacher perceived psychological control and perceived teacher support. Instead, the role of satisfaction at school as a mediator between number of absences and perceived teacher support and role of need satisfaction between teacher perceived psychological control and number of absences and academic achievement were significant. Probably this could due

to the fact that SR is a multidimensional process that refers to different aspects that, if taken individually, may not necessarily result in a reduction in academic achievement, but instead integrated together can adequately represent the complexity of the SR and therefore highlight this relationship.

Overall, the results of this study are consistent with SDT (Ryan and Deci, 2017) that asserts that an individual's effective functioning depends on the satisfaction of basic psychological needs, which in turn are influenced by the interpersonal context. Moreover, this is the first study to investigate the relationship between teacher perceived psychological control and support, need satisfaction and need frustration at school, and SR behavior from the perspective of SDT. The findings provide an important contribution to the literature on SR behavior by suggesting that a school environment that cannot support students' basic psychological needs can be a risk factor for SR development and poor academic achievement. Moreover, it has been shown that a supportive context can promote the satisfaction of basic psychological needs and have an influence on the number of absences.

This study has some limitations. First, the direction of the effects hypothesized in our model cannot be tested, due to the use of self-reports measures. Although the evaluation and interpretation of events play an important role in the functional and dysfunctional behaviors of individuals, the only use of students' "self-assessment on the support of teachers" autonomy and the psychological control of teachers could be considered a limitation of the study. Indeed, student responses may have been more influenced by their interpretative bias than by the actual behavior of teachers. Therefore, future studies should include different measurement and evaluation methods to verify the correspondence between the interpretation of a behavior and actual behavior.

A further limitation is that the sample is small size and consists only of high school students, thus preventing the generalization of the results. Future research should include a sample of children from middle and elementary schools.

Despite these limitations, the results have important practical implications in the school context. It is clear that it is possible to implement teacher training aimed at modifying the intrusive practices that rely on the manipulation of youths' psychological and emotional states (Barber, 1996; Soenens and Vansteenkiste, 2010) by advocating supportive practices

that involve paying attention to students' needs, encouraging conversation, and providing suggestions on ways to improve (Reeve et al., 2004; Reeve and Jang, 2006; Yu et al., 2015). Increasing teachers' awareness of their style of teaching and modifying dysfunctional attitudes could have repercussions for the classroom climate, favoring a context in which students feel autonomous, competent, and connected with others. This, in turn, can reduce the emergence of dysfunctional behaviors such as SR and increase academic achievement.

Future research lines could examine whether other sources of support (e.g., parents and peers) can hinder the negative effects of intrusive teacher practices. Indeed, the literature shows that a supportive context encourages autonomy and satisfies competence and relatedness needs. This increases the level of student engagement, promotes self-realization and facilitates positive functioning among adolescents within schools (Reeve and Jang, 2006).

DATA AVAILABILITY

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

This study was carried out in accordance with the recommendations of Codice Etico dell'Associazione Italiana di Psicologia (AIP), with written informed consent from all subjects. All subjects gave written informed consent in accordance with the Declaration of Helsinki. The protocol was approved by the University of Messina.

AUTHOR CONTRIBUTIONS

PF assisted with the manuscript preparation, study design, and study concept. CB assisted with the manuscript preparation, data analysis, and study design. SC assisted with the manuscript editing, data analysis, and interpretation of results. LS assisted with the manuscript preparation, study design, and study supervision.

REFERENCES

- Aelterman, N., Vansteenkiste, M., Van den Bergh, L., De Meyer, J., and Haerens, L. (2014). Fostering a need-supportive teaching style: intervention effects on physical education teachers' beliefs and teaching behaviors. *J. Sport. Exerc. Psychol.* 36, 595–609. doi: 10.1123/jsep.2013-0229
- Assor, A., Kaplan, H., Kanat-Maymon, Y., and Roth, G. (2005). Directly controlling teacher behaviors as predictors of poor motivation and engagement in girls and boys: the role of anger and anxiety. *Learn. Instr.* 15, 397–413. doi: 10.1016/j.learninstruc.2005.07.008
- Baker, M., and Bishop, F. L. (2015). Out of school: a phenomenological exploration of extended non-attendance. *Educ. Psychol. Pract.* 31, 354–368. doi: 10.1080/02667363.2015.1065473
- Barber, B. K. (1996). Parental psychological control: revisiting a neglected construct. *Child Dev.* 67, 3296–3319. doi: 10.1111/j.1467-8624.1996.tb01915.x
- Barry, A. E., Chaney, B., and Chaney, D. (2010). The impact of truant and alcohol-related behaviour on educational aspirations: a study of US high school senior. *J. Sch. Health* 81, 485–492. doi: 10.1111/j.1746-1561.2011.00618.x
- Belmont, M., Skinner, E., Wellborn, J., and Connell, J. (1988). *Teacher as Social Context: A Measure of Student Perceptions of Teacher Provision of Involvement, Structure, and Autonomy Support* (Technical Report no. 102). Rochester, NY: University of Rochester.
- Chen, B., Vansteenkiste, M., Beyers, W., Boone, L., Deci, E. L., Van der Kaap-Deeder, J., et al. (2015). Basic psychological need satisfaction, need frustration, and need strength across four cultures. *Motiv. Emot.* 39, 216–236. doi: 10.1007/s11031-014-9450-1

- Cheon, S. H., and Reeve, J. (2015). A classroom-based intervention to help teachers decrease students' amotivation. *Contemp. Educ. Psychol.* 40, 99–111. doi: 10.1016/j.cedpsych.2014.06.004
- Cordeiro, P. M., Paixão, M. P., Lens, W., Lacante, M., and Luyckx, K. (2016). The Portuguese validation of the basic psychological need satisfaction and frustration scale: concurrent and longitudinal relations to well-being and ill-being. *Psychol. Belg.* 56, 193–209. doi: 10.5334/pb.252
- Costa, S., Cuzzocrea, F., Gugliandolo, M. C., and Larcán, R. (2016). Associations between parental psychological control and autonomy support, and psychological outcomes in adolescents: the mediating role of need satisfaction and need frustration. *Child Indic. Res.* 9, 1059–1076. doi: 10.1007/s12187-015-9353-z
- Costa, S., Gugliandolo, M. C., Barberis, N., Cuzzocrea, F., and Liga, F. (2019). Antecedents and consequences of parental psychological control and autonomy support: the role of psychological basic needs. *J. Soc. Pers. Relat.* 36, 1168–1189. doi: 10.1177/0265407518756778
- Costa, S., Ingoglia, S., Inguglia, C., Liga, F., Lo Coco, A., and Larcán, R. (2018). Psychometric evaluation of the basic psychological need satisfaction and frustration scale (BPNSFS) in Italy. *Meas. Eval. Couns. Dev.* 51, 193–206. doi: 10.1080/07481756.2017.1347021
- Deci, E. L., and Ryan, R. M. (2000). The “what” and “why” of goal pursuits: human needs and the self-determination of behavior. *Psychol. Inq.* 11, 227–268. doi: 10.1080/08870440902783628
- Dembo, R., Wareham, J., Schmeidler, J., and Winters, K. C. (2016). Exploratory two-level analysis of individual- and school-level factors on truant youth emotional/psychological functioning. *J. Educ. Res.* 109, 596–607. doi: 10.1080/00220671.2014.1002881
- Filippello, P., Buzzai, C., Costa, S., Orecchio, S., and Sorrenti, L. (in press). Teaching style and academic achievement: the mediating role of learned helplessness and mastery orientation. *Psychol. Sch.*
- Filippello, P., Buzzai, C., Messina, G., Mafodda, A. V., and Sorrenti, L. (2019). School refusal in students with low academic performances and specific learning disorder. The role of self-esteem and perceived parental psychological control. *Int. J. Disabil. Dev. Educ.* doi: 10.1080/1034912X.2019.1626006
- Filippello, P., Harrington, N., Buzzai, C., Sorrenti, L., and Costa, S. (2014). The relationship between frustration intolerance, unhealthy emotions, and assertive behaviour in Italian students. *J. Ration. Emot. Cogn. Behav. Ther.* 32, 257–278. doi: 10.1007/s10942-014-0193-4
- Filippello, P., Harrington, N., Costa, S., Buzzai, C., and Sorrenti, L. (2018a). Perceived parental psychological control and school learned helplessness: the role of frustration intolerance as a mediator factor. *Sch. Psychol. Int.* 39, 360–377. doi: 10.1177/0143034318775140
- Filippello, P., Larcán, R., Sorrenti, L., Buzzai, C., Orecchio, S., and Costa, S. (2017). The mediating role of maladaptive perfectionism in the association between perceived psychological control and learned helplessness. *Improving Schools* 20, 113–126. doi: 10.1177/1365480216688554
- Filippello, P., Sorrenti, L., Buzzai, C., and Costa, S. (2015). Perceived parental psychological control and learned helplessness: the role of school self-efficacy. *Sch. Ment. Health* 7, 298–310. doi: 10.1007/s12310-015-9151-2
- Filippello, P., Sorrenti, L., Buzzai, C., and Costa, S. (2018b). Predicting risk of school refusal: examining the incremental role of trait EI beyond personality and emotion regulation. *Psihologija* 51, 51–67. doi: 10.2298/psi170526013f
- Fiorilli, C., Grimaldi Capitello, T., Barni, D., Buonomo, I., and Gentile, S. (2019). Predicting adolescent depression: the interrelated roles of self-esteem and interpersonal stressors. *Front. Psychol.* 10:565. doi: 10.3389/fpsyg.2019.00565
- González, C., Inglés, C. J., Sanmartín, R., Vicent, M., Calderón, C. M., and García-Fernández, J. M. (2018). Testing factorial invariance and latent means differences of the school refusal assessment scale-revised in Ecuadorian adolescents. *Curr. Psychol.* 1–10. doi: 10.1007/s12144-018-9871-1
- González, C., Kearney, C. A., Lagos-Sanmartín, N., Sanmartín, R., Vicent, M., Inglés, C. J., et al. (2017). School refusal assessment scale-revised: factorial invariance and latent means differences across gender and age. *J. Psychoeduc. Assess.* 36, 835–843. doi: 10.3389/fpsyg.2016.02011
- González, C., Sanmartín, R., Vicent, M., Inglés, C. J., Aparicio-Flores, M. P., and García-Fernández, J. M. (2018). Academic self-attributions for success and failure in mathematics and school refusal. *Psychol. Sch.* 55, 366–376. doi: 10.1002/pits.22117
- Haerens, L., Aelterman, N., Vansteenkiste, M., Soenens, B., and Van Petegem, S. (2015). Do perceived autonomy-supportive and controlling teaching relate to physical education students' motivational experiences through unique pathways? Distinguishing between the bright and dark side of motivation. *Psychol. Sport Exerc.* 16, 26–36. doi: 10.1016/j.psychsport.2014.08.013
- Hair, J., Anderson, R., Tatham, R., and Black, W. (1998). *Multivariate Data Analysis*. Englewood Cliffs, NJ: Prentice-Hall.
- Hambleton, R. K. (2001). The next generation of the ITC Test Translation and Adaptation Guidelines. *Eur. J. Psychol. Assess.* 17, 164–172. doi: 10.1027//1015-5759.17.3.164
- Havik, T., Bru, E., and Ertesvåg, S. K. (2015). Assessing reasons for school non-attendance. *Scand. J. Educ. Res.* 59, 316–336. doi: 10.1080/00313831.2014.904424
- Heyne, D., Gren-Landell, M., Melvin, G., and Gentle-Genitty, C. (2019). Differentiation between school attendance problems: why and how? *Cogn. Behav. Pract.* 26, 8–34. doi: 10.1016/j.cbpra.2018.03.006
- Heyne, D., Sauter, F. M., Ollendick, T. H., Van Widenfelt, B. M., and Westenberg, P. M. (2014). Developmentally sensitive cognitive behavioral therapy for adolescent school refusal: rationale and case illustration. *Clin. Child Fam. Psychol. Rev.* 17, 191–215. doi: 10.1007/s10567-013-0160-0
- Ingul, J. M., Havik, T., and Heyne, D. (2019). Emerging school refusal: a school-based framework for identifying early signs and risk factors. *Cogn. Behav. Pract.* 26, 46–62. doi: 10.1016/j.cbpra.2018.03.005
- Kearney, C. A. (2002). Identifying the function of school refusal behavior: a revision of the school refusal assessment scale. *J. Psychopathol. Behav. Assess.* 24, 235–245.
- Kearney, C. A. (2007). Forms and functions of school refusal behavior in youth: an empirical analysis of absenteeism severity. *J. Child Psychol. Psychiatry* 48, 53–61. doi: 10.1111/j.1469-7610.2006.01634.x
- Kearney, C. A. (2008). *Helping School Refusing Children & Their Parents A guide for School-based Professionals*. Oxford: Oxford University Press.
- Kearney, C. A., and Albano, A. M. (2010). *Quando i bambini rifiutano la scuola. Una guida alla terapia cognitivo-comportamentale [When Children Refuse the School A Guide to Cognitive-Behavioral Therapy]*. Milano: Franco Angeli.
- Kearney, C. A., and Spear, M. (2014). “School refusal behavior,” in *Translating Psychological Research into Practice*, eds L. Grossman and S. Walfish (Washington, DC: American Psychological Association), 83–85.
- Kline, R. B. (2015). *Principles and Practice of Structural Equation Modeling*. New York, NY: Guilford publications.
- Liga, F., Ingoglia, S., Cuzzocrea, F., Inguglia, C., Costa, S., Lo Coco, A., et al. (2018). The basic psychological need satisfaction and frustration scale: Construct and predictive validity in the Italian context. *J. Pers. Assess.* 2, 1–11. doi: 10.1080/00223891.2018.1504053
- Malu, B., and Reddy, K. J. (2016). Basic psychological needs satisfaction, academic performance: mediating role of motivation. *Int. Educ. Res. J.* 2, 75–78.
- Maynard, B. R., Heyne, D., Brendel, K. E., Bulanda, J. J., Thompson, A. M., and Pigott, T. D. (2018). Treatment for school refusal among children and adolescents: A systematic review and meta-analysis. *Res. Soc. Work Pract.* 28, 56–67. doi: 10.1177/1049731515598619
- Maynard, B. R., Salas-Wright, C. P., Vaughn, M. G., and Peters, K. E. (2012). Who are truant youth? Examining distinctive profiles of truant youth using latent profile analysis. *J. Youth Adolesc.* 41, 1671–1684. doi: 10.1007/s10964-012-9788-1
- Molinari, L., and Mameli, C. (2018). Basic psychological needs and school engagement: a focus on justice and agency. *Soc. Psychol. Educ.* 21, 157–172. doi: 10.1007/s11218-017-9410-1
- Murberg, T. A., and Bru, E. (2009). The relationships between negative life events, perceived support in the school environment and depressive symptoms among Norwegian senior high school students: a prospective study. *Soc. Psychol. Educ.* 12, 361–370. doi: 10.1007/s11218-008-9083-x
- Nelemans, S. A., Halle, W. W., Branje, S. J., Raaijmakers, Q. A., Van Lier, P. A., and Meeus, W. H. (2014). Heterogeneity in development of adolescent anxiety disorder symptoms in an 8-year longitudinal community study. *Dev. Psychopathol.* 26, 181–202. doi: 10.1017/S0954579413000503
- Niemiec, C. P., and Ryan, R. M. (2009). Autonomy, competence, and relatedness in the classroom: applying self-determination theory to educational practice. *School Field* 7, 133–144. doi: 10.1177/1477878509104318

- Reeve, J. (2009). Why teachers adopt a controlling motivating style toward students and how they can become more autonomy supportive. *Educ. Psychol.* 44, 159–175. doi: 10.1080/00461520903028990
- Reeve, J., Deci, E. L., and Ryan, R. M. (2004). “Self-determination theory: a dialectical framework for understanding socio-cultural influences on student motivation,” in *Big Theories Revisited*, eds D. M. McInerney and S. Van Etten (Greenwich, CT: Information Age Press), 31–60.
- Reeve, J., and Jang, H. (2006). What teachers say and do to support students’ autonomy during a learning activity. *J. Educ. Psychol.* 98, 209–218. doi: 10.1037/0022-0663.98.1.209
- Rigante, L., and Patrizi, C. (2007). Il rifiuto scolastico [The school refusal]. *Cognitivism Clinico* 4, 124–138.
- Rogers, K. N., Buchanan, C. M., and Winchell, M. E. (2003). Psychological control during early adolescence: links to adjustment in differing parent/adolescent dyads. *J. Early Adolesc.* 23, 349–383. doi: 10.1177/0272431603258344
- Ryan, R. M., Connell, J. P., and Grolnick, W. S. (1992). “When achievement is not intrinsically motivated: A theory of internalization and self-regulation in school,” in *Cambridge Studies in Social and Emotional Development. Achievement and Motivation A Social-Developmental Perspective*, eds A. K. Boggiano and T. S. Pittman (New York, NY: Cambridge University Press), 167–188.
- Ryan, R. M., and Deci, E. L. (2017). *Self-determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. New York, NY: Guilford Publications.
- Soenens, B., Sierens, E., Vansteenkiste, M., Dochy, F., and Goossens, L. (2012). Psychologically controlling teaching: examining outcomes, antecedents, and mediators. *J. Educ. Psychol.* 104, 108–120. doi: 10.1037/a0025742
- Soenens, B., and Vansteenkiste, M. (2010). A theoretical upgrade of the concept of parental psychological control: proposing new insights on the basis of self-determination theory. *Dev. Rev.* 30, 74–99. doi: 10.1016/j.dr.2009.11.001
- Sorrenti, L., Filippello, P., Buzzai, C., Buttò, C., and Costa, S. (2018). Learned helplessness and mastery orientation: the contribution of personality traits and academic beliefs. *Nord. Psychol.* 70, 71–84. doi: 10.1080/19012276.2017.1339625
- Sorrenti, L., Filippello, P., Buzzai, C., and Costa, S. (2015a). A psychometric examination of the learned helplessness questionnaire in a sample of Italian school students. *Psychol. Sch.* 52, 923–941. doi: 10.1002/pits.21867
- Sorrenti, L., Filippello, P., Buzzai, C., and Costa, S. (2015b). Tolleranza alla frustrazione e benessere psicologico: quale relazione? [frustration tolerance and psychological well-being: what relation?]. *Psicologia della salute* 3, 65–86. doi: 10.3280/pds2015-003004
- Sorrenti, L., Filippello, P., Orecchio, S., and Buzzai, C. (2016). Learned helplessness and learning goals: role played in school refusal. a study on Italian students. *Med. J. Clin. Psychol.* 4:35.
- Thornton, M., Darmody, M., and McCoy, S. (2013). Persistent absenteeism among Irish primary school pupils. *Educ. Rev.* 65, 488–501. doi: 10.1080/00131911.2013.768599
- Vansteenkiste, M., Niemiec, C. P., and Soenens, B. (2010). “The development of the five mini-theories of self-determination theory: an historical overview, emerging trends, and future directions,” in *Advances in Motivation and Achievement v. 16A—The Decade Ahead: Theoretical Perspectives on Motivation and Achievement*, eds T. C. Urdan and S. A. Karabenick (London: Emerald Group Publishing Limited), 105–165. doi: 10.1108/s0749-7423(2010)000016a007
- Yahaya, A., Ramli, J., Hashim, S., Ibrahim, M. A., Kadir, H. B. H., Boon, Y., et al. (2010). The effects of various modes of absenteeism problem in school on the academic performance of students in secondary schools. *Eur. J. Soc. Sci.* 12, 624–639.
- Yu, C., Li, X., and Zhang, W. (2015). Predicting adolescent problematic online game use from teacher autonomy support, basic psychological needs satisfaction, and school engagement: A 2-year longitudinal study. *Cyberpsychol. Behav. Soc. Netw.* 18, 228–233. doi: 10.1089/cyber.2014.0385

Conflict of Interest Statement: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2019 Filippello, Buzzai, Costa and Sorrenti. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



The Joint Effect of Paternal and Maternal Parenting Behaviors on School Engagement Among Chinese Adolescents: The Mediating Role of Mastery Goal

Juan Wang^{1,2}, Xinxin Shi^{1,2}, Ying Yang³, Hong Zou^{1,2*}, Wenjuan Zhang⁴ and Qunxia Xu^{1,2}

¹ Institute of Developmental Psychology, Beijing Normal University, Beijing, China, ² Beijing Key Laboratory of Applied Experimental Psychology, Faculty of Psychology, Beijing Normal University, Beijing, China, ³ School of Behavioural and Health Sciences, Australian Catholic University, Sydney, NSW, Australia, ⁴ Department of Psychology, School of Philosophy, Wuhan University, Wuhan, China

OPEN ACCESS

Edited by:

Christopher Kearney,
University of Nevada, Las Vegas,
United States

Reviewed by:

Alejandro Veas,
University of Alicante, Spain
Monica Pellerone,
Kore University of Enna, Italy
Mercedes Inda-Caro,
Universidad de Oviedo, Spain

*Correspondence:

Hong Zou
hongz@bnu.edu.cn

Specialty section:

This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Psychology

Received: 22 March 2019

Accepted: 24 June 2019

Published: 10 July 2019

Citation:

Wang J, Shi X, Yang Y, Zou H,
Zhang W and Xu Q (2019) The Joint
Effect of Paternal and Maternal
Parenting Behaviors on School
Engagement Among Chinese
Adolescents: The Mediating Role
of Mastery Goal.
Front. Psychol. 10:1587.
doi: 10.3389/fpsyg.2019.01587

The present study aimed to explore the joint effect of paternal and maternal parenting behaviors on adolescent's school engagement, and the mediating role of mastery goal. A total of 2,775 Chinese adolescent participants (55.3% females, mean age = 15.70, $SD = 1.57$) from two-parent families were recruited in 2014, who rated their perceptions of emotional warmth, behavioral guidance, harsh discipline of their father and mother, as well as their own mastery goal and school engagement. Results showed that paternal and maternal parenting behaviors had interaction effects on school engagement with different interaction patterns. Specifically, the interactions of both parents' emotional warmth and both parents' behavioral guidance displayed strengthening patterns, where one parent's high emotional warmth or behavioral guidance enhanced the positive relationship between the corresponding parenting behavior of the other parent and adolescents' school engagement. By contrast, the interaction of both parents' harsh discipline displayed an interfering pattern, where one parent's high level of harsh discipline reduced the negative relationship between harsh discipline of the other parent and school engagement. Further, all three interaction effects between father and mother on school engagement were mediated by mastery goal. These findings underline the importance of viewing family from a systematic perspective and the benefits of supportive parenting behavior of both parents.

Keywords: paternal parenting behaviors, maternal parenting behaviors, school engagement, mastery goal, adolescents

INTRODUCTION

School engagement is a vital and positive index of students' school lives (Schaufeli et al., 2002) and is defined as the quality of students' involvement with the endeavor of schooling, including cognitive, affective, and behavioral engagement (Fredricks et al., 2004). Prior studies have revealed that students who are more actively engaged in school

achieve higher grades, show better school adjustment, and tend to become competent members of the society (Wang and Holcombe, 2010; Li and Lerner, 2011). Meanwhile, school engagement is found to be negatively related to ages (Wang and Eccles, 2012) and exist significant individual differences (Janosz et al., 2008) in adolescence. Thus, it's necessary to examine the factor influencing adolescents' school engagement.

Parenting behaviors refer to the specific, goal-directed behaviors that parents use to socialize their children (Prevatt, 2003), and are identified as a vital family context that can influence adolescents' school engagement. Inspired by family system theory (Bornstein and Sawyer, 2005), which suggests that a father and a mother make a joint contribution to their offspring's academic development, previous studies have found that the relationship between one parent's parenting behavior and developmental outcomes can be moderated by the parenting behavior of the other parent (McKee et al., 2007; Lowe and Dotterer, 2013; Foster et al., 2016). However, these studies focused on offspring's socioemotional functioning or academic outcomes, it is unclear how paternal and maternal parenting behaviors have a joint of effect on adolescents' school engagement. To address this gap, this study aims to investigate whether there exists the interaction effect between the similar type of paternal and maternal parenting behaviors on adolescents' school engagement. If there exists, which mediator can make it work? Mastery goal, referring to the motivation to develop competence, is shown to play a mediating role in the relationship between parenting behaviors and school engagement (Skinner et al., 2009; Luo et al., 2013). In order to reveal the motivational mechanism, the present study also wants to examine the role of mastery goal on how the interaction effects between paternal and maternal parenting behaviors on school engagement.

Parenting Behaviors and School Engagement

Parents are the first teachers of their children's, their parenting behaviors have a profound influence on individual achievement-related outcomes (Spera, 2005; Castro et al., 2015; Vasquez et al., 2016; Garrett-Peters et al., 2019). Different parenting behaviors may have different effects on adolescents' school engagement. Some parenting behaviors are supportive, such as warmth or autonomy support (e.g., providing warmth, love, care, and encouragement of autonomous behaviors), which can improve offspring's academic development (Joussemet et al., 2008; Hill and Wang, 2015; Doctoroff and Arnold, 2017). However, some parenting behaviors such as physical punishment (e.g., spanking, hitting) and psychological control (e.g., guilt induction, love withdrawal, shaming) are considered as non-supportive and detrimental to offspring's school performance (Joussemet et al., 2008; Su et al., 2015; Wang et al., 2018). Physical punishment and psychological control are similar in essence, as both can control the child through parental authority and may cause resentment or aversive (Nelson et al., 2006). The two forms of punishment can be integrated as harsh discipline (Wang and Liu, 2014), which has proved to be a typical manifestation of Chinese parenting culture

(Wang and Liu, 2014; Wang et al., 2017). Specifically, it is defined as that parents impose their own will on their children with non-supportive strategies such as punishment or withdrawal care to control behaviors of their children.

Different parenting cultures have different views on behavioral control, which causes the controversial effect of behavioral control (Chao, 2001; Gershoff et al., 2010; Helwig et al., 2014). Behavioral control in Western culture is defined as parental behaviors that attempt to control or manage children's behavior by rules and restrictions (Barber, 1996). One example is "My parents asked me where I went with my friends." According to Western definition, monitoring and rule setting is emphasized in the content of behavioral control (Pomerantz and Wang, 2009), and prior studies have shown that this concept is unrelated to academic achievement (e.g., Bean et al., 2003, 2006), and may even have a slight negative association with academic achievement (Kramer, 2012). However, in Chinese culture, parents are considered to be responsible for teaching their offspring so that the young and dependent child can become a qualified economic and social success (Wu, 1996). It is also believed that behavioral control over children's activities and behaviors in the physical world provides children with needed guidance (Wang et al., 2007), and is also seen as a predictive variable for better academic achievement (Chao, 1994; Lee et al., 2012). In this study, the term behavioral guidance is used instead of behavioral control, which emphasizes the culture of teaching or training. It means that parents train children's sense of rules and behavioral habits to conform to social norms.

Although China has the largest population in the world (Sangawi et al., 2015), most research on parents' role in children's behavior and achievement outcomes are based on Western parenting culture (Kim and Wong, 2002; Hill and Wang, 2015, pp. 185). Thus, the present study aims to investigate whether parenting behaviors (emotional warmth, behavioral guidance, harsh discipline) have an effect on school engagement in the Chinese cultural context. We hypothesize that emotional warmth and behavioral guidance are positively associated with school engagement, but harsh discipline is negatively associated with school engagement (hypothesis 1 or H1).

The Joint Effect of Father and Mother

As the involvement of fathers in parenting becomes more popular (Sarkadi et al., 2008; Martin et al., 2010; Jaynes, 2015), it is important to consider the joint contribution of both parents to their offspring. According to Bronfenbrenner's (1986) ecological system theory, both father and mother are important microsystem partners for children's development, which underlines the importance of combining the effect of paternal and maternal parenting behaviors (Pleck, 2007, a review). Family system theory further declares that the family system is an organized whole, and its subsystems, including individuals and their relationships, are interdependent and dynamic. Based on this, some scholars investigated the joint contribution of paternal and maternal parenting to their offspring's psychosocial adjustment by analyzing their interaction with each other (Li and Meier, 2017, a review; Papadaki and Giovazolias, 2015); other studies supported the interaction

effect on school performance (Lowe and Dotterer, 2013; Babinski et al., 2017).

The interaction of the parenting behaviors of fathers and mothers may follow three patterns. The first is *strengthening pattern*, which means that the association between academic development and one supportive parent can be intensified when the other parent is also supportive. The second pattern is *buffering pattern*, which occurs when one parent is non-supportive, the other parent's supportive behavior then plays a protective role in offspring's academic development. The third pattern is *interfering pattern*, that is, the influence of one parent on academic development may be hindered or reduced by the other parent. This pattern is relatively rare but possible.

Although there are some valuable studies on the interactions of maternal and paternal parenting, these studies focused on offspring's socioemotional functioning or academic outcomes (McKee et al., 2007; Lowe and Dotterer, 2013; Foster et al., 2016). There is insufficient research on whether paternal and maternal parenting behaviors will also have an interaction effect on adolescents' school engagement. Therefore, the current study aims to address this gap by testing whether the effect of one parent's parenting behavior on adolescent's school engagement is moderated by the corresponding parenting behavior of the other parent (e.g., father's emotional warmth, and mother's emotional warmth). Given that strengthening, buffering, and interfering patterns of interactions are all plausible, we assume that the interactions between father and mother are significant (hypothesis 2 or H2), but do not assume that the interactions will take on a specific pattern.

Motivational Mechanism of Mastery Goal

Although the joint effect of paternal and maternal parenting behaviors may plausibly explain the differences in adolescents' school engagement, it remains unclear how adolescents' motivational factor may affect the relationship between two parents' parenting behaviors and school engagement. The self-system model of motivational development posits that motivational factors such as goal orientation can contribute to the quality of individual engagement (Deci and Ryan, 2000; Skinner et al., 2009). Many researchers support a linear and temporal order of engagement-related processes which can be described as context → motivation → engagement. That is, students' motivation can be shaped by the quality of the context they interact with, which then influences their engagement in learning and subsequent development outcomes (Skinner et al., 2009; Lawson and Lawson, 2013). Under this framework, the mediating role of mastery goal in the relationship between family context and academic performance has gradually become a research hotspot (Skinner et al., 2009; Luo et al., 2013; Chen, 2015).

Mastery goal represents students' motivation to develop competence (Ames and Archer, 1988), which is proven to be associated with adaptive patterns of learning by experimental, correlational, as well as qualitative research (Kaplan and Maehr, 2007, a review). Mastery-oriented students tend to spend more time studying with their own initiative, persist longer in the face of difficulties, report greater interest and effort, employ deep

learning strategies more frequently (Liem et al., 2008; Benita et al., 2014). Therefore, mastery goal is identified as a beneficial goal approach to improve students' school engagement, the higher level of mastery goal, the more actively engaged in learning tasks (Gonida et al., 2007, 2009; Kaplan and Maehr, 2007).

The development of mastery goal during the school years may be explained by parenting behaviors. Parental involvement, autonomy support, and warmth can prompt the formation of mastery goal, whereas punishment and psychological control are found to be non-significant associated with mastery goal (Duchesne and Ratelle, 2010; Fletcher et al., 2012; Chen, 2015; Diaconu-Gherasim and Măirean, 2016). However, the role of parental behavioral control in shaping mastery goal is ambiguous. For instance, a study conducted in the Chinese sample found that authoritarian, a kind of parenting style characterized by punishment and strict enforcement, is unrelated to mastery goal (Chen, 2015). Another study focuses on parental coercive discipline also found similar results in the Singapore sample (Luo et al., 2013). By contrast, a study within the Australian context found that parental monitoring is positively associated with mastery goal (Boon, 2007). Luo et al. (2013) further indicated that parental involvement could affect children's mastery goal, and mastery goal could, in turn, promote children's engagement in classwork and homework, but mastery goal could not mediate the relationship between parental coercive discipline and engagement.

In short, different parenting behaviors have different roles in shaping mastery goal, and then produce an impact on academic behavior and outcomes. Based on this premise, this study also aims to explore the mediating role of mastery goal. Referring to the results of Luo et al. (2013), mastery goal is supposed to play a mediator in the relationship between parental emotional warmth and school engagement, but not in the relationship between parental harsh discipline and school engagement in the present study. And due to behavioral guidance was defined as positive parenting in this study, it is assumed to be positively linked with mastery goal, and then foster school engagement (hypothesis 3 or H3). In addition, as aforementioned, paternal and maternal parenting behaviors may have an interaction effect on school engagement, whether the interaction effect will be mediated by mastery goal is unclear. To address this issue, mediated moderation models will be tested in this study. We hypothesize that the interaction effect of paternal and maternal parenting behaviors on mastery goal will be significant, but the residual interaction effect on school engagement will be reduced or non-significant (hypothesis 4 or H4).

The Present Study

To understand whether and how paternal and maternal parenting behaviors have a joint effect on adolescents' school engagement, we aim to explore the interaction effect between paternal and maternal parenting behaviors on adolescents' school engagement based on family system theory. Further, based on the self-system model of motivational development, we also hope to examine the mediating effect of mastery goal on the link between paternal parenting behavior, maternal parenting behavior, the interaction

term of father and mother, and school engagement. Based on this, we proposed the following four hypotheses:

Hypothesis (H1). Parental emotional warmth and behavioral guidance will positively predict school engagement; harsh discipline will negatively predict school engagement, regardless of the sex of the parents.

Hypothesis (H2). There will be significant interaction effects between paternal and maternal parenting behavior on adolescents' school engagement. However, the interaction effect of different pairs of parenting dimensions will display different patterns.

Hypothesis (H3). Mastery goal will mediate the relationship between emotional warmth, behavioral guidance and school engagement, but will not mediate the relationship between harsh discipline and school engagement.

Hypothesis (H4). Mastery goal will also mediate the relationship between the interaction terms of each pair of paternal and maternal parenting dimension and school engagement.

MATERIALS AND METHODS

Participants

Participants were middle and high school students from a broader project focusing on the relationship between family environment and students' mental health. In total, 3,080 adolescents participated in this study. They were from eight public middle/high schools (108 classes), covering three urban districts and three rural districts of Beijing, China. Because the goal was to explore the interaction between paternal and maternal parenting, data of participants from one-parent families were excluded. In sum, data of 2,775 participants from two-parent families were adopted in this study. Their ages ranged from 10.75 years old to 18.92 years old. Participants were from four grades, including grade 7 ($N = 521$, $M_{\text{age}} = 13.43$ years, $SD = 0.48$), grade 8 ($N = 553$, $M_{\text{age}} = 14.36$ years, $SD = 0.47$), grade 10 ($N = 941$, $M_{\text{age}} = 16.40$ years, $SD = 0.45$), and grade 11 ($N = 760$, $M_{\text{age}} = 17.35$ years, $SD = 0.47$). Because of imminent graduation, students from grade 9 and grade 12 grades were not included in this survey. Although 34 of 2,775 participants were not able to complete the study questionnaires due to conflicting tasks or emergencies, the missing data represented only a small percentage (1.2%) of the data and was handled with full information maximum likelihood (FIML) procedures. FIML is a model-based parameter estimation method, of which estimates are computed by maximizing the likelihood of a missing value based on observed values in the data. It has been suggested that FIML approach can maximize the use of available data information and produce unbiased estimates under ignorable missing data conditions (Enders and Bandalos, 2001).

Procedure

This study was approved by the Ethics Committee of the Faculty of Psychology, Beijing Normal University. Because the potential risk of the protocol was low and the data collection

was anonymous, the letter that described the study and consent forms were only sent to school administrators and teachers. Before the data collection, the class adviser sent a message to tell parents about the purpose and voluntary nature of this survey in the Parents WeChat Group. All parents responded in the WeChat Group that they had been informed and agreed to their children's participation in this survey. Students were also informed of the purpose and voluntary nature of the survey and their right to withdraw at any time. All voluntary participants completed a self-reported questionnaire booklet in the quiet of their classrooms. The questionnaires were administered by the first author and postgraduate students in Psychology who received training. It took approximately 20 min for students to complete the survey. Students received small gifts for their participation.

Measures

Parenting Behaviors

Due to the difference in parenting culture, a parenting behavior scale adapted to the characteristics of Chinese parenting culture is needed. Based on the existing constructs and content of classical parenting style scales such as the Egma Minnen av Bardndosnaupforstran (EMBU, Perris et al., 1980) and the Ghent Parental Behavior Scale (GPBS, Van Leeuwen, 1999), a new and more concise parenting behavior scale was developed in this study. The new scale includes three dimensions, emotional warmth, behavior guidance, and harsh discipline.

In China, parents emphasize the importance of loving and caring child as parents in European American (Chao, 1995; Chao and Tseng, 2002). They spend time with their children, encourage children's autonomous behaviors, which is similar to the measure content of emotional warmth dimension of EMBU and positive parenting of GPBS. We integrated their contents and used the name of emotional warmth in the present study. Behavioral guidance, a new dimension in this study, refers to parental guidance and training in children's sense of rules and behaviors habits. Different from the typical measurement of behavioral control in Western culture which emphasizes monitoring and rule setting (Barber, 1996), the content of behavioral guidance reflects teaching or guidance in Chinese parenting culture. Items of behavioral guidance were adapted and developed from Behavioral Control Scale (Wang et al., 2007) and the rules dimension of GPBS (Van Leeuwen, 1999). Harsh discipline is an integrated concept of physical punishment and psychological control, which means parents impose their own will on their children with non-supportive strategies. Items of harsh discipline were adapted from negative control factor of GPBS (Van Leeuwen and Vermulst, 2004) and Psychological Control Scale (Wang et al., 2007).

The final scale includes 21 items, seven items for emotional warmth (e.g., "My father/mother does activities together with me, because they know that I enjoy it, such as sports, walking, shopping"), five items for behavior guidance (e.g., "father/mother teaches me to be polite to others"), and nine items for harsh discipline (e.g., "My father/mother often blame me for being lazy and useless in front of others"). Participants were asked to evaluate their paternal and maternal parenting behavior

separately, and rated each item on a five-point Likert scale ranging from very strongly disagree (1) to very strongly agree (5).

Prior to the formal study, we collected responses from 556 adolescents to test the construct validity of the scale. Exploratory factor analysis (EFA) showed that the three factors model of both father ($\chi^2(150) = 279.43$, $p < 0.001$; RMSEA = 0.04; CFI = 0.96; TLI = 0.95) and mother ($\chi^2(150) = 284.240$, $p < 0.001$; RMSEA = 0.04; CFI = 0.96; TLI = 0.95) were supported, and factor loadings varied from 0.376 to 0.818 for all items. In the formal study, the new scale was also proved to have good validity and reliability. The results of confirmatory factor analysis (CFA) for both parents were acceptable (father: $\chi^2(186) = 1072.35$, $p < 0.001$; RMSEA = 0.04; CFI = 0.95; TLI = 0.95; mother: $\chi^2(186) = 1000.483$, $p < 0.001$; RMSEA = 0.04; CFI = 0.95; TLI = 0.95). Cronbach alpha coefficients varied from 0.83 to 0.88.

Mastery Goal

The Achievement Goal Orientation scale developed by Elliot and Thrash (2002) was proven to be applicable to Chinese culture (Lau and Lee, 2008). The mastery goal dimension of this scale was used in this study, including 5 items (e.g., “I like to learn something really challenging in class so that I can learn something new”). Participants were asked to indicate their agreement on a five-point Likert type scale, ranging from unlike me (1) to very much like me (5). The Cronbach alpha coefficient of mastery goal was 0.78.

School Engagement

The Student Engagement Questionnaire developed by Lam et al. (2012) and revised by Chinese researchers (Ma et al., 2015) was used to measure school engagement. The questionnaire consisted of 16 items across three dimensions: behavioral engagement (e.g., “I try hard to do well in school”), cognitive engagement (e.g., “When I study, I try to connect what I am learning with my own experiences”), and affective engagement (e.g., “I like what I am learning in school”). Participants were asked to indicate their agreement on a five-point Likert type scale, varying from unlike me (1) to very much like me (5). This scale demonstrated good internal reliability, as Cronbach alpha coefficients of three dimensions varied from 0.88 to 0.91. The Cronbach alpha of the full scale was 0.93.

Covariates

Gender, age, and socio-economic status (SES) were considered as covariates to partial out their possible impacts on parenting behavior, mastery goal, and school engagement (Hoff et al., 2002; Walker et al., 2006; Pellerone et al., 2018). SES information was reported by students, including their parental education level and occupations, respectively and the monthly income of both father and mother.

Prior to formal data analysis, indicators of SES were assigned (Shi and Shen, 2007). Education level was coded from 1 to 4 (1 = junior middle school education or below, 2 = high school or technical school education, 3 = Bachelor's degree, 4 = Master's degree or above); occupations were coded from 1 to 5 (1 = unemployed or temporary work, 2 = manufacturing or service, 3 = office work, 4 = administrative or managerial,

5 = professional and technical); and family monthly income was coded from 1 to 7 (1 = relying on government relief, 2 = less than 3,000 RMB, 3 = 3,000 to 5,000 RMB, 4 = 5,000 to 8,000 RMB, 5 = 8,000 to 12,000 RMB, 6 = 12,000 to 20,000 RMB, 7 = more than 20,000 RMB). The number and ratio of each category of SES characteristics can be seen in **Table 1**. After coding, the five indicators of SES were standardized separately, and the principal component analysis was applied to obtain factor loadings of each indicator. Finally, the total family SES was synthesized with factor loadings as the weight (Bradley and Corwyn, 2002).

Analytic Plan

To avoid the potential for a common method bias caused by self-report, we adopted an anonymous measurement and conducted Harman's single-factor test. All items in this study were loaded into an EFA and the results revealed the presence of ten factors with initial eigenvalues greater than 1.00. The first factor accounted for 21.69% of the variance, suggesting that the influence of common method variance was quite small (Podsakoff et al., 2003).

Three steps were used to investigate whether and how paternal and maternal parenting behaviors interacted with each other as they impact adolescents' school engagement, and whether the interaction effects on school engagement will be mediated by mastery goal. First, descriptive statistics were presented to help understand the subsequent results. Second, to examine whether paternal and maternal parenting behaviors have a unique effect (H1) and an interaction effect (H2) on school engagement, a simple moderation model with only one dimension of paternal and maternal parenting behavior, their interaction term (the product of two predictors), school engagement, and control variables (age, gender, SES) were established. When the interaction effect was significant, the Johnson-Neyman technique was used to probe when (at what point) the relationship between paternal parenting behavior and school engagement was changed by maternal parenting behavior (Preacher et al., 2007). Third, mastery goal was integrated into simple moderation model to examine its mediating effect on school engagement. In fact, the current model is a mediated moderation model. We tested whether each pair of parental and maternal parenting dimension and their interaction term have an indirect effect on school engagement via mastery goal (H3 and H4).

Mplus 8 was adopted in this study. Because subjects were clustered into classrooms, TYPE = COMPLEX and CLUSTER = Class were set. In addition, Robust maximum likelihood estimation (MLR) was used to produce χ^2 test statistics for data with non-normal and non-independence of observations (Benner et al., 2008). All variables, except for control variables, were latent structural, and the latent interaction term was estimated with the XWITH command, using FIML estimation with robust standard errors. In addition, due to Mplus software cannot provide fitting indices required to assess the validity of model with the latent interaction term, the model fitting was assessed by referring to the method proposed by Maslowsky et al. (2015). Specifically, ensuring there are qualified fitting indices of the model without latent interaction term at first. Next, the value of D was computed by comparing the log-likelihood values

of two models with (M1) and without (M0) latent interaction term. $D = -2 [(\log\text{-likelihood for M0}) - (\log\text{-likelihood for M1})]$. According to Maslowsky et al. (2015), the values of D can be compared to a Chi-Square distribution using $df = 1$. If the log-likelihood ratio test is significant, indicating the model with the latent interaction term is a well-fitted model.

warmth [$t = -24.92$, $p < 0.001$, 95% CI: $(-0.33, -0.28)$], behavioral guidance [$t = -10.17$, $p < -0.001$, 95% CI: $(-0.11, -0.08)$], as well as harsh discipline [$t = -7.47$, $p < 0.001$, 95% CI: $(-0.11, -0.06)$]. The means, standard deviations, and inter-correlations for all variables were presented in Table 2.

RESULTS

Descriptive Statistics

A paired samples t -test was conducted to compare paternal and maternal parenting behaviors. As predicted, compared to fathers, mothers were perceived to provide higher emotional

Simple Moderation Model

In order to test whether paternal and maternal parenting behaviors have a unique effect (H1) and an interaction effect (H2) on school engagement, three simple moderation models were examined. In each model, school engagement was the outcome variable, and a pair of paternal and maternal parenting dimension, as well as their latent interaction term were the

TABLE 1 | Socio-economic status characteristics of participants' parents.

	Mother		Father		Family	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Educational level						
≤junior middle school	926	33.37	874	31.50		
high or technical school	985	35.50	993	35.78		
Bachelor's degree	740	26.67	697	25.12		
≥Master's degree	124	4.47	211	7.60		
Occupation						
unemployed or temporary work	416	14.99	145	5.23		
manufacturing or service	663	23.89	823	29.66		
office work	951	34.27	970	34.95		
administrative or managerial	447	16.11	411	14.81		
professional and technical	298	10.74	427	15.39		
Monthly income						
relying on government relief					22	0.79
<3,000 RMB					267	9.62
3,000–5,000 RMB					731	26.34
5,000–8,000 RMB					789	28.43
8,000–12,000 RMB					476	17.15
12,000–20,000 RMB					261	9.41
>20,000 RMB					228	8.22

TABLE 2 | Inter-correlations of the variables.

	<i>M (SD)</i>	1	2	3	4	5	6	7	8	9	10
(1) F-warmth	3.52 (0.77)										
(2) M-warmth	3.69 (0.71)	0.75***									
(3) F-guidance	3.85 (0.70)	0.66***	0.53***								
(4) M-guidance	4.03 (0.63)	0.54***	0.66***	0.79***							
(5) F-harsh	2.38 (0.76)	−0.47***	−0.37***	−0.29***	−0.25***						
(6) M-harsh	2.44 (0.75)	−0.37***	−0.48***	−0.22***	−0.26***	0.75***					
(7) mastery goal	3.72 (0.76)	0.27***	0.26***	0.24***	0.26***	−0.14***	−0.15***				
(8) school engagement	3.61 (0.79)	0.34***	0.33***	0.30***	0.30***	−0.21***	−0.22***	0.67***			
(9) age	15.67 (1.58)	0.02	0.05**	0.00	0.00	−0.05**	−0.07***	−0.07***	−0.08***		
(10) gender		0.07***	0.09***	0.35	0.56**	−0.18***	−0.10***	−0.03	0.01	0.01	
(11) SES		0.15***	0.14***	0.13***	0.13***	−0.10***	−0.10***	0.05***	0.14***	0.23***	−0.01

** $p < 0.01$, *** $p < 0.001$.

TABLE 3 | Model fit indices of simple moderation models and mediated moderation models.

			χ^2/df	RMSEA	CFI	TLI	SRMR	Log-likelihood	D
Simple moderation models	emotional warmth	M0	7.10	0.05	0.96	0.95	0.03	−51130.26	14.73
		M1						−51122.89	
	behavioral guidance	M0	3.38	0.03	0.99	0.98	0.02	−38459.41	19.34
		M1						−38449.74	
	harsh discipline	M0	3.69	0.03	0.97	0.97	0.03	−65310.86	15.93
		M1						−65302.90	
Mediated moderation models	emotional warmth	M0	7.82	0.05	0.94	0.93	0.04	−68289.04	25.48
		M1						−68276.30	
	behavioral guidance	M0	6.62	0.05	0.95	0.94	0.03	−55611.48	26.04
		M1						−55598.46	
	harsh discipline	M0	5.05	0.04	0.95	0.94	0.04	−82478.26	15.83
		M1						−82470.35	

In this table, M0 and M1 represent the model without and with the latent interaction term, respectively. $D = -2 [(\log\text{-likelihood for M0}) - (\log\text{-likelihood for M1})]$. In this study, all the log-likelihood ratio tests were significant, suggesting models with latent interaction term are well-fitted.

predictive variables. Before testing the hypotheses, the log-likelihood ratio test demonstrated that all three models with latent interaction term were well-fitted (Table 3). Results of path analysis supported both H1 and H2. In the model of emotional warmth, after controlling for age, gender and SES, paternal emotional warmth still positively predicted school engagement ($\beta = 0.16, p < 0.001$), as did maternal emotional warmth ($\beta = 0.25, p < 0.001$). The interaction effect between paternal and maternal emotional warmth was also significant ($\beta = 0.07, p = 0.002$). The model of behavioral guidance had similar results, where both paternal and maternal behavioral guidance positively predicted school engagement (father: $\beta = 0.19, p < 0.001$; mother: $\beta = 0.26, p < 0.001$), as well as their latent interaction term ($\beta = 0.08, p < 0.001$). In the model of harsh discipline, the main effect of the mother on school engagement was significant ($\beta = -0.17, p = 0.001$), and that of the father was non-significant ($\beta = -0.06, p = 0.213$). The interaction effect between paternal and maternal behavioral guidance on school engagement was significant ($\beta = 0.08, p = 0.004$).

Figure 1 shows the interpretation of the interactions by the Johnson-Neyman technique to plot changes in the association between paternal parenting dimension and school engagement according to the level of the corresponding maternal dimension. The y-axis represents the standardized slope for paternal parenting dimension, and the x-axis represents data within 2 standard deviations of the mean of the corresponding maternal dimension. The solid lines represent the simple slope estimates for paternal parenting dimension, and the dotted lines represent the 95% CI around the estimates. Based on the plot of Figure 1A, the positive association between paternal emotional warmth and school engagement increased as maternal emotional warmth improved, which was in accordance with the strengthening pattern. The simple slope of paternal emotional warmth was positive and significantly different from zero when maternal emotional warmth was equal to or over -0.58 units. A similar pattern was seen in Figure 1B, that is, the predictive effect of paternal behavioral guidance on school engagement increased as maternal behavioral guidance increased, and the turning point was -0.77 units. By contrast, Figure 1C showed that the

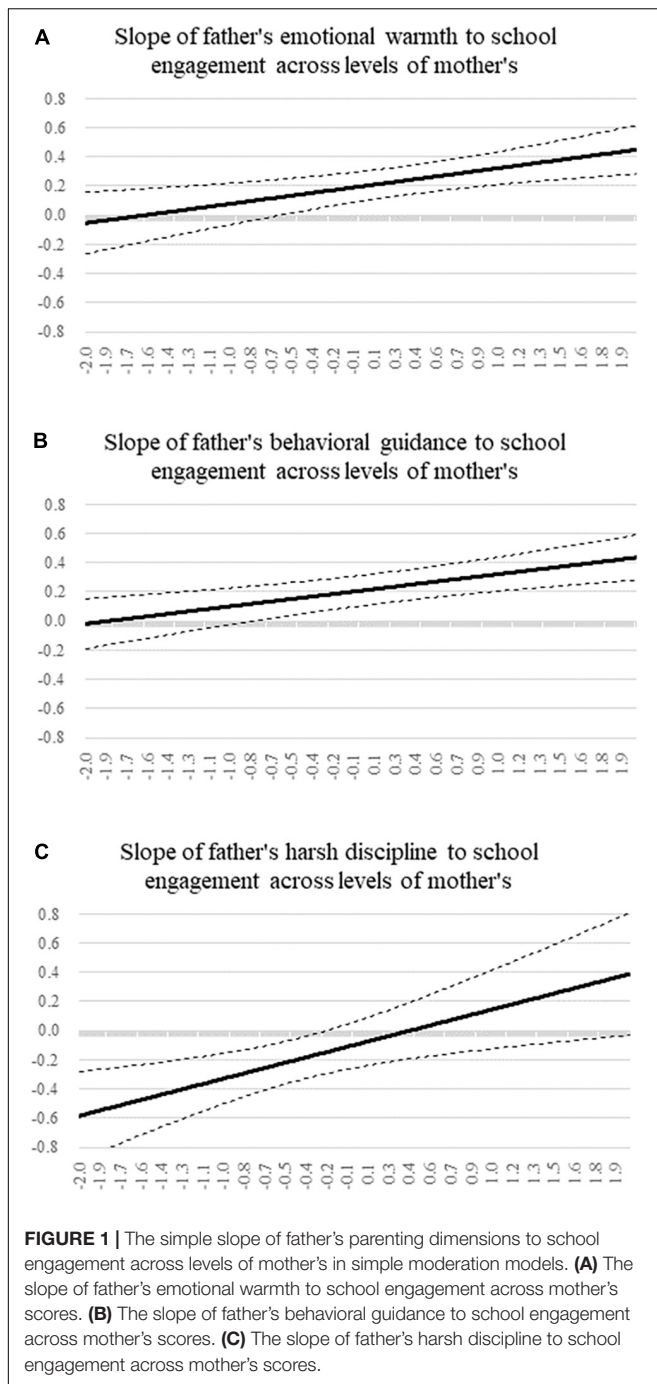
negative association between paternal harsh discipline and school engagement decreased when maternal harsh discipline increased, which was consistent with the interfering pattern. The simple slope of paternal harsh discipline was non-significant when a mother's score was over -0.21 units.

Mediated Moderation Model

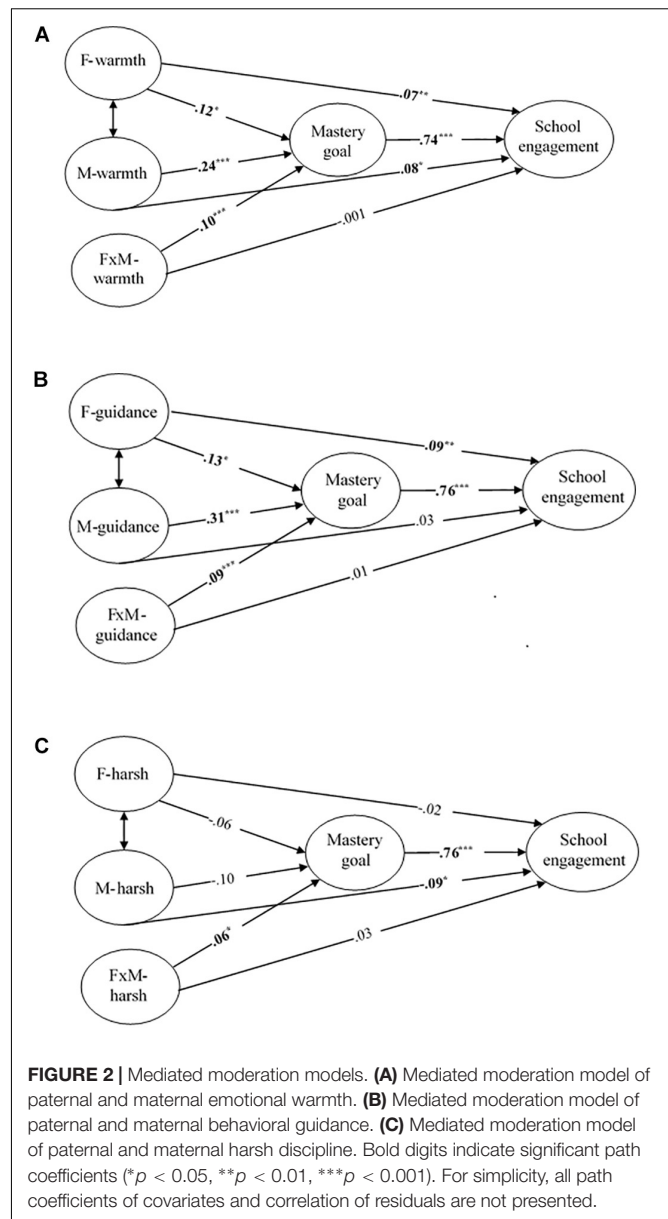
To test whether the moderating effect of maternal parenting dimension would be mediated by mastery goal, three mediated moderation models were examined. Mediated moderation was indicated if the estimation results met three criteria: (1) the latent interaction term of paternal and maternal parenting dimension significantly predicted mastery goal; (2) the mastery goal significantly predicted school engagement; (3) the predictive effect of latent interaction term on school engagement declined in magnitude (or rendered non-significant) in comparison with the same coefficient estimated in the simple moderation model (Muller et al., 2005).

As expected, the log-likelihood ratio test demonstrated that all three mediated moderation models presented qualified model fit (Table 2) and the model structures could be seen in Figure 2. Results found evidence for significant interactions between each pair of paternal and maternal parenting dimension for mastery goal (emotional warmth: $\beta = 0.10, p < 0.001$; behavioral guidance: $\beta = 0.09, p < 0.001$; harsh discipline: $\beta = 0.06, p = 0.047$), which indicated that the first criterion was met. In addition to the interaction effect, the main effects of both paternal and maternal emotional warmth on mastery goal were significant (father: $\beta = 0.12, p = 0.022$; mother: $\beta = 0.24, p < 0.001$), so were paternal and maternal behavioral guidance (father: $\beta = 0.13, p = 0.014$; mother: $\beta = 0.31, p < 0.001$), but that of both paternal and maternal harsh discipline were non-significant (father: $\beta = -0.06, p = 0.238$; mother: $\beta = -0.10, p = 0.082$). As for the second criterion, mastery goal positively predicted school engagement. For the third criterion, the predictive effects of three interaction terms on school engagement were non-significant.

The above results suggest that the three mediated moderation models were credible. The moderating effects of maternal parenting behavior dimensions on the relationship between



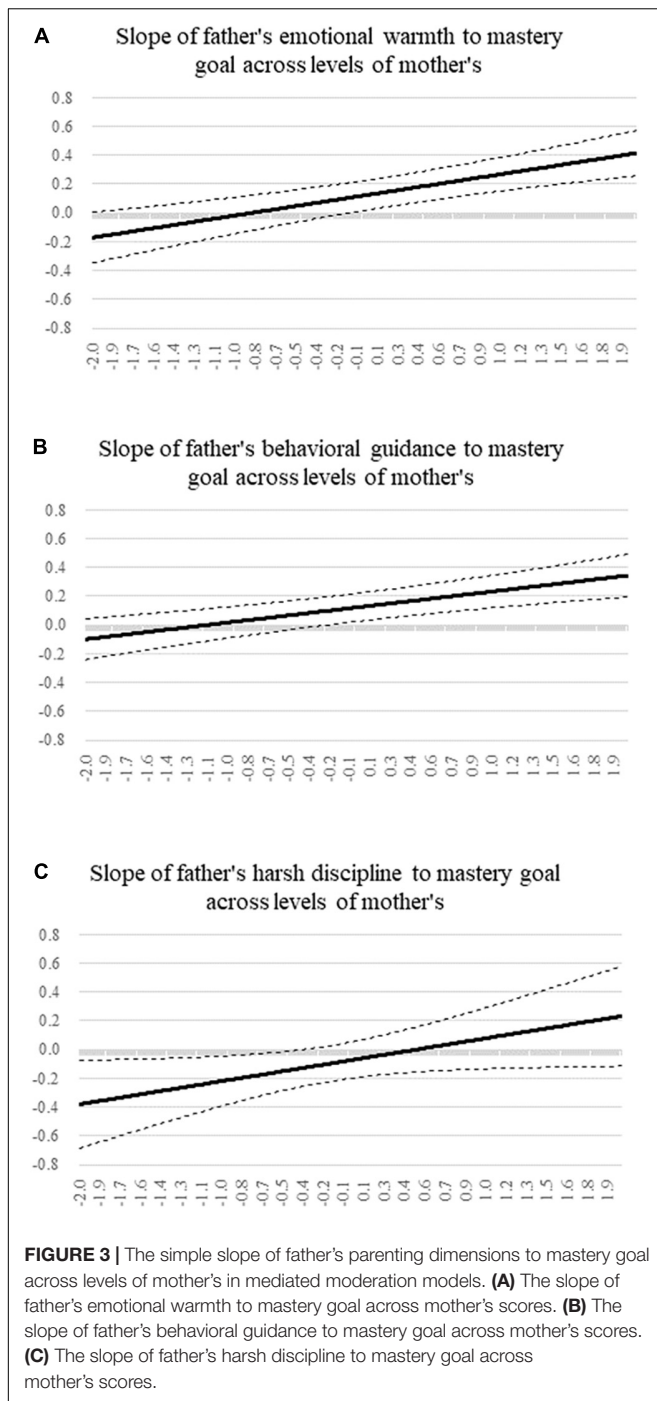
paternal parenting behavior dimensions and school engagement were completely mediated by mastery goal, which supported both H3 and H4. Further, we used the Johnson-Neyman technique to plot changes in the path of each paternal parenting behavior dimension with regard to mastery goal. Both the interaction of paternal and maternal emotional warmth and that of behavioral guidance met the strengthening pattern, while harsh discipline supported the interfering pattern. As **Figures 3A,B** depicted, the size of the path coefficient from paternal emotional warmth to mastery goal, and from paternal behavioral guidance to



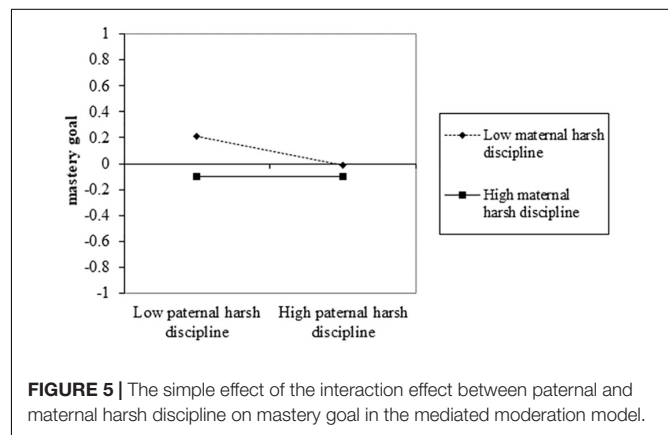
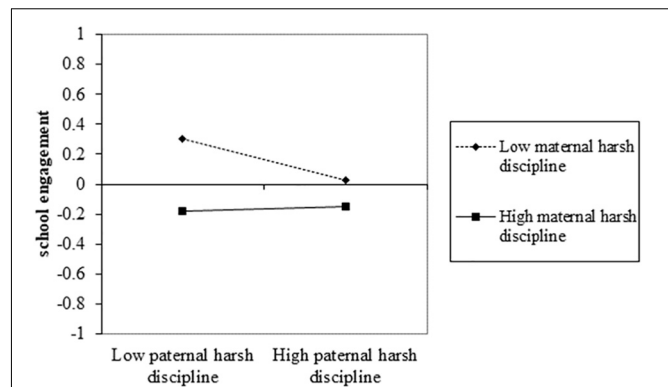
mastery goal increased as the maternal corresponding dimension improved. The turning point for the former was -0.10 units, and for the latter was -0.21 units. The two effects were significantly greater than zero when mother scores were equal to or above the points. On the contrary, as shown in **Figure 3C**, the size of the path coefficient from paternal harsh discipline to mastery goal decreased when maternal harsh discipline increased. The negative effect of paternal harsh discipline on mastery goal was non-significant when mother's score was over -0.35 units.

Supplementary Analysis

To determine the extent of the paternal moderating effect, we calculated the effect of the maternal parenting dimension across levels of paternal corresponding dimension using the Johnson-Neyman technique. Again, paternal emotional warmth and



behavioral guidance enhanced, while paternal harsh discipline depressed the paths from the maternal corresponding dimensions to school engagement in the simple moderation models, and from the maternal corresponding dimensions to mastery goal in the mediated moderation models. In the simple moderation model, the paths from maternal emotional warmth and behavioral guidance to school engagement were more than zero when the father's score was equal to or over -1.42 units, and -1.66 units, respectively. The negative effect of maternal harsh discipline was



non-significant when the father's score was over 0.33 units. In the mediated moderation model, with reference to predicting mastery goal, the turning point of the moderating effect was -0.87 units for father's emotional warmth, -1.67 units for father's behavioral guidance, and -0.08 units for father's harsh discipline. Overall, mothers contributed to adolescents' academic variables across a wider range of scores than fathers.

To more intuitively understand the infrequent interaction effect of paternal and maternal harsh discipline on school engagement in the simple moderation model, and the interaction effect on mastery goal in the mediated moderation model, pick-a-point approach was adopted to describe scores of school engagement and mastery goal when father and mother's scores of harsh discipline were above or below one standard deviation from the mean. As shown in **Figure 4**, in the simple moderation model, adolescents' score of school engagement was only above mean when both parents were low harsh discipline. Once one parent was high harsh discipline, adolescents can experience relatively lower school engagement. **Figure 5** showed a similar result of the score of mastery goal in the mediated moderation model.

DISCUSSION

Based on family system theory and the self-system model, the present study expanded existing knowledge on the role of parenting behaviors in school engagement among Chinese adolescents. The results indicated that the interaction effects of both parents' emotional warmth and both parents' behavioral guidance on school engagement displayed the strengthening pattern, while both parent' harsh discipline supported the interfering pattern. In addition, the mediated moderation model was supported and all three interactions were mediated by mastery goal. These results underline the importance of viewing family from a systematic perspective and examining the motivational mechanism underlying the relationship between parenting behaviors and academic behavior.

Parenting Behaviors and School Engagement

The first purpose of this study was to test the overall direct relationship between parental parenting behaviors and school engagement among Chinese adolescents. In line with Hypothesis 1, both fathers and mothers made unique contributions to their offspring's school engagement, even after controlling for age, gender, and SES.

Parental emotional warmth—parental love, support, and presence with regard to the child—is regarded as supportive parenting behavior in both Western and Chinese cultures (Khaleque, 2013; Yap et al., 2014). Consistent with previous studies, our study provides supportive evidence that both paternal and maternal emotional warmth motivates adolescents to be actively involved in their studies (Bempechat and Shernoff, 2012; Lowe and Dotterer, 2013). Parental warmth provides an emotional foundation for adolescents that enhances their sense of self-efficacy and promotes an internalized sense of competence, which will result in healthy exploration and a higher level of involvement in school activities (Juang and Silbereisen, 2002; Hill and Wang, 2015).

Parental behavioral guidance reflects rational parental teaching and guidance for their children and was developed as an independent dimension in a new parenting tool based on Chinese culture. We considered parental behavioral guidance as a positive control and it was shown to predict school engagement positively in this study. In China, training children is regarded as the responsibility of parents (Chao, 1994; Wu, 1996). Parents provide guidance to help children better understand the purpose of learning, establish good learning habits, and thus promote their willingness to be involved in learning (Patall et al., 2008).

We integrated the content of punishment and psychological control as parental harsh discipline in the new tool, which included both physical punishment and psychological punishment. Parents with a high level of harsh discipline behavior may spank their offspring or threaten to withdraw love if the child fails in school. These negative responses may increase adolescents' negative affect (e.g., learning-weariness and excessive anxiety) and rebellion, thereby undermine their learning (Grolnick, 2003; Su et al., 2015).

In line with this view, our study found that maternal harsh discipline was negatively associated with students' school engagement (Cheung et al., 2016; Wang et al., 2018). Although the main effect of paternal harsh discipline on students' school engagement became non-significant when maternal harsh discipline was controlled, the simple effect analysis has shown that it can negatively predict school engagement when maternal harsh discipline was at a low level. More detailed discussion will be presented in the next section.

The Joint Effect of Father and Mother

According to the family system theory, the effects of the father's and mother's parenting behaviors on children's school engagement are interdependent (Bornstein and Sawyer, 2005). The results of the simple interaction model revealed the joint effect of both parents on adolescents' school engagement, the effect of one parent's behavior can be moderated by the other parent's behavior. Further, our results indicated that different parenting behaviors of the father and the mother follow different interaction patterns.

The interaction effects of both parents' emotional warmth and behavioral guidance were in accordance with the strengthening pattern. Specifically, mothers' emotional warmth and behavioral guidance can enhance the positive relationship between the corresponding parenting behavior of fathers and adolescents' school engagement. One possible explanation is that those supportive mothers may provide a higher level of love, company, and guidance for their children which makes children more open to the influence of the parenting behavior of other important persons such as fathers (Darling and Steinberg, 1993).

However, the interaction effect of paternal and maternal harsh discipline displayed the interfering pattern. The negative relationship between paternal harsh discipline and school engagement was significant when maternal harsh discipline was equal to or below -0.21 units. The negative effect of maternal harsh discipline was significant when the paternal score was equal to or below -0.35 units. It indicates that when one parent's harsh discipline is high, the negative effect of the other parent's harsh discipline on school engagement is no longer significant. This interaction pattern is rare but understandable (Foster et al., 2016), as it seems to indicate that the risk of parental harsh discipline exists a ceiling effect. In other words, once one parent is high dominating and controlling, adolescents will develop low levels of school engagement.

In addition, in keeping with previous studies, we also found the dominative effect of mothers on adolescents' school engagement compared with fathers (Sayer et al., 2004; Martin et al., 2010). Mothers not only scored higher than fathers in all three parenting dimensions, but also contributed more to adolescents' mastery goal and school engagement. This may be reflective of the fact that mothers spend more time with adolescents (Larson and Richards, 1994; Laible and Carlo, 2004). Although mothers seem to play essential roles in parenting, it does not mean fathers are not important. In fact, adolescents had higher scores on school engagement when both parents scored high in supportive parenting.

Mediation Effect of Mastery Goal

Our findings also revealed that both paternal and maternal emotional warmth and behavioral guidance indirectly predicted school engagement via mastery goal. The significant mediating effect of mastery goal not only underlines the benefits of mastery goal in improving students' engagement in learning (Elliot and Church, 1997; Wolters, 2004; Gonida et al., 2009), but also highlights the close link between parental parenting behaviors and mastery goal. Parental emotional warmth and behavioral guidance offer children a sense of emotional security and comfort, make them feel higher self-efficacy, more likely to strive for growth (Trusty and Lampe, 1997) and foster the mastery goal (Duchesne and Ratelle, 2010; Luo et al., 2013), then engaged more in learning (Gonzalez-DeHass et al., 2005; Spera, 2005). By contrast, both parents' harsh discipline behavior negatively but not significantly predicted mastery goal, which is in line with previous studies (Duchesne and Ratelle, 2010; Fletcher et al., 2012; Chen, 2015; Diaconu-Gherasim and Măirean, 2016). Controlling parents tend to be more concerned with their children's grades than skills, they are also inclined to give excessive punishment or praise to encourage their children to excel academically (Gurland and Grolnick, 2005). Consequently, it is possible that adolescents study so as to meet parents' expectations and to avoid harsh punishment which makes it difficult for adolescents to develop the desire to acquiring knowledge or improve skills based on their own motivation (Dweck, 1986; Duchesne and Ratelle, 2010).

More importantly, all three latent interaction terms significantly predicted school engagement via mastery goal. Similar to the interaction effects on school engagement, both high emotional warmth and behavioral guidance of one parent strengthened the link between the corresponding dimension of the other parent and mastery goal. These findings suggest that adolescents who perceive supportive parenting behavior from both parents are motivated to achieve higher levels of competence than if only one parent possesses high supportive parenting behavior. This, in turn, increases their level of school engagement (Shim et al., 2008; Gonida et al., 2009). However, one parent's harsh discipline will interfere with the link between the other parent's harsh discipline and mastery goal. This finding reveals the necessity of examining the interaction effect between paternal and maternal parenting behaviors. Although both paternal and maternal harsh discipline cannot predict mastery goal independently, their interaction effect on mastery goal is found, which indicates that once one parent is high dominating and controlling, adolescents can experience relatively lower motivation to improve their competence, and then lead to lower school engagement.

Limitations

Limitations of this study cannot be ignored. First, due to the constraints of time and funds, we adopted a cross-sectional design, which inhibits the possibility to explore causal relationships among investigated variables. Also, the idea of "the influential child" (Davidov et al., 2015) was not addressed in

this study. According to this idea, the cognitive and behavioral characters of adolescents may, in turn, affect the way parents interact with them. In the future, a longitudinal study can be conducted to understand the dynamic reciprocity between context and learning behaviors.

Second, our results do not adequately explain the effect of one parent's parenting behavior on the other parent's parenting behavior. According to research in the field of co-parenting, one parent's attitude, especially the mother's, does influence the level of the other parent's involvement (Yan et al., 2018). To further explore the dynamics of parental parenting behavior, a future study can explore how the parenting behavior of fathers and mothers influence each other.

Finally, all index variables of this study were self-report which may lead to biased results even though large samples were used to reduce the bias. A research setting based on multiple reporting agents will be used in the future.

Implications for Practice, Application, and Theory

The results of this study have important implications for practice, application, and theory. First, by exploring the interactions between similar parenting behavior of both fathers and mothers, this study found significant joint effects for the parenting behavior of both parents. The interaction patterns of strengthening and interfering seem to indicate that the positive effect of supportive parenting behavior has no upper limit, while the negative effect of non-supportive parenting behavior does. Adolescents can benefit more when both parents are supportive, while their learning motivation and behavior can be affected negatively once one parent is excessive harsh and controlling. This result underlines that both parents are important for parenting, and both of them should try to be more supportive. However, many parents in China always hold different attitudes to their offspring, one plays the villain, and the other plays the hero. This collaborative parenting approach may be not good for the child.

Second, this study showed that behavioral guidance is a parenting behavior that should not be ignored in Chinese culture. Future studies should focus more on the special parenting culture of China.

Finally, mastery goal played a significant mediating role, which supports the importance of children developing competence. To cultivate adolescents' involvement in learning, it's necessary for both parenting programs aimed at promoting the usage of supportive parenting behaviors and adolescent programs aimed at guide adolescents to focus more on their self-improvement.

CONCLUSION

The present study made a contribution to the family system theory and the self-system model of motivational development. Specifically, paternal and maternal emotional warmth, behavioral guidance can produce both unique and interaction effects on school engagement through motivating adolescents to develop competence. For the interaction effects, one parent's supportive

parenting can intensify the positive role of the other parent's. However, paternal and maternal harsh discipline can only produce an interaction effect on school engagement via inhibiting the formation of mastery goal. The risk of parental harsh discipline seems to exist a ceiling effect, but it needs to be further tested in future research.

DATA AVAILABILITY

The raw data supporting the conclusions of this manuscript will be made available by the authors, without undue reservation, to any qualified researcher.

ETHICS STATEMENT

This study was approved by the Ethics Committee of the Faculty of Psychology, Beijing Normal University. Because the potential risk of the protocol was low and the data collection was anonymous, the letter that described the study and consent forms were only sent to school administrators and teachers. Before the data collection, the class adviser sent a message to tell parents

about the purpose and voluntary nature of this survey in the Parents WeChat Group. All parents responded in the WeChat Group that they had been informed and agreed to their children's participation in this survey. Students were also informed of the purpose and voluntary nature of the survey and their right to withdraw at any time.

AUTHOR CONTRIBUTIONS

JW contributed to all aspects of work for this study. YY, XS, and HZ contributed to conception and design and revising the manuscript critically. WZ and QX contributed to data.

FUNDING

This study was supported by the major projects from the Ministry of Education of Humanities and Social Science for the key research under Grant No. 14JJD190003 and the MOE Project of Key Research Institutes of Humanities and Social Science at Universities under Grant No. 16JJD880007.

REFERENCES

- Ames, C., and Archer, J. (1988). Achievement goals in the classroom: student learning strategies and motivation processes. *J. Educ. Psychol.* 80, 260–267. doi: 10.1037/0022-0663.80.3.260
- Babinski, D. E., Waschbusch, D. A., King, S., Joyce, A. M., and Andrade, B. F. (2017). Maternal and paternal parenting and associations with school performance in a sample of children with varying levels of externalizing behavior problems. *Sch. Ment. Health* 9, 322–333. doi: 10.1007/s10826-006-9066-5
- Barber, B. K. (1996). Parental psychological control: revisiting a neglected construct. *Child Dev.* 67, 3296–3319. doi: 10.1111/j.1467-8624.1996.tb01915.x
- Bean, R. A., Barber, B. K., and Crane, D. R. (2006). Parental support, behavioral control, and psychological control among African American youth: the relationships to academic grades, delinquency, and depression. *J. Fam. Issues* 27, 1335–1355. doi: 10.1177/0192513X06289649
- Bean, R. A., Bush, K. R., McKenry, P. C., and Wilson, S. M. (2003). The impact of parental support, behavioral control, and psychological control on the academic achievement and self-esteem of African American and European American adolescents. *J. Adolesc. Res.* 18, 523–541. doi: 10.1177/0743558403255070
- Bempechat, J., and Shernoff, D. J. (2012). "Parental influences on achievement motivation and student engagement," in *Handbook of Research on Student Engagement*, eds S. L. Christenson, A. L. Reschly, and C. Wylie (New York, NY: Springer), 315–342. doi: 10.1007/978-1-4614-2018-7_15
- Benita, M., Roth, G., and Deci, E. L. (2014). When are mastery goals more adaptive? It depends on experiences of autonomy support and autonomy. *J. Educ. Psychol.* 106, 258–267. doi: 10.1037/a0034007
- Benner, A. D., Graham, S., and Mistry, R. S. (2008). Discerning direct and mediated effects of ecological structures and processes on adolescents' educational outcomes. *Dev. Psychol.* 44, 840–854. doi: 10.1037/0012-1649.44.3.840
- Boon, H. J. (2007). Low- and high-achieving Australian secondary school students: their parenting, motivations and academic achievement. *Aust. Psychol.* 42, 212–225. doi: 10.1080/00050060701405584
- Bornstein, M. H., and Sawyer, J. (2005). "Family systems," in *Blackwell Handbook of Early Childhood Development*, eds K. McCartney and D. Phillips (Malden, MA: Blackwell), 381–398.
- Bradley, R. H., and Corwyn, R. F. (2002). Socioeconomic status and child development. *Ann. Rev. Psychol.* 53, 371–399. doi: 10.1146/annurev.psych.53.100901.135233
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: research perspectives. *Dev. Psychol.* 22, 723–742. doi: 10.1037/0012-1649.22.6.723
- Castro, M., Expósito-Casas, E., López-Martín, E., Lizasoain, L., Navarro-Asencio, E., and Gaviria, J. L. (2015). Parental involvement on student academic achievement: a meta-analysis. *Educ. Res. Rev.* 14, 33–46. doi: 10.1016/j.edurev.2015.01.002
- Chao, R. K. (1994). Beyond parental control and authoritarian parenting style: understanding Chinese parenting through the cultural notion of training. *Child Dev.* 65, 1111–1119. doi: 10.1111/j.1467-8624.1994.tb00806.x
- Chao, R. K. (1995). Chinese and European American cultural models of the self reflected in mothers' child rearing beliefs. *Ethos* 23, 328–354. doi: 10.1525/eth.1995.23.3.02a00030
- Chao, R. K. (2001). Extending research on the consequences of parenting style for Chinese Americans and European Americans. *Child Dev.* 72, 1832–1843. doi: 10.1111/1467-8624.00381
- Chao, R., and Tseng, V. (2002). "Parenting of Asians," in *Handbook of Parenting: Social Conditions and Applied Parenting*, Vol. 4, ed. M. H. Bornstein (Mahwah, NJ: Lawrence Erlbaum Associates), 59–93.
- Chen, W. W. (2015). The relations between perceived parenting styles and academic achievement in Hong Kong: the mediating role of students' goal orientations. *Learn. Individ. Differ.* 37, 48–54. doi: 10.1016/j.lindif.2014.11.021
- Cheung, C. S., Pomerantz, E. M., Wang, M., and Qu, Y. (2016). Controlling and autonomy-supportive parenting in the United States and China: beyond children's reports. *Child Dev.* 87, 1992–2007. doi: 10.1111/cdev.12567
- Darling, N., and Steinberg, L. (1993). Parenting style as context: an integrative model. *Psychol. Bull.* 113, 487–496. doi: 10.1037/0033-2909.113.3.487
- Davidov, M., Knafo-Noam, A., Serbin, L. A., and Moss, E. (2015). The influential child: how children affect their environment and influence their own risk and resilience. *Dev. Psychopathol.* 27, 947–951. doi: 10.1017/S0954579415000619
- Deci, E. L., and Ryan, R. M. (2000). "What is the self in self-directed learning? Findings from recent motivational research," in *Conceptions of Self-Directed Learning: Theoretical and Conceptual Considerations*, ed. G. Staka (Munster: Waxmann), 75–92.
- Diaconu-Gherasim, L. R., and Măirean, C. (2016). Perception of parenting styles and academic achievement: the mediating role of goal orientations. *Learn. Individ. Differ.* 49, 378–385. doi: 10.1016/j.lindif.2016.06.026

- Doctoroff, G. L., and Arnold, D. H. (2017). Doing homework together: the relation between parenting strategies, child engagement, and achievement. *J. Appl. Dev. Psychol.* 48, 103–113. doi: 10.1016/j.appdev.2017.01.001
- Duchesne, S., and Ratelle, C. (2010). Parental behaviors and adolescents' achievement goals at the beginning of middle school: emotional problems as potential mediators. *J. Educ. Psychol.* 102, 497–507. doi: 10.1037/a0019320
- Dweck, C. S. (1986). Motivational processes affecting learning. *Am. Psychol.* 41, 1040–1048. doi: 10.1037/0003-066X.41.10.1040
- Elliot, A. J., and Church, M. A. (1997). A hierarchical model of approach and avoidance achievement motivation. *J. Pers. Soc. Psychol.* 72, 218–232. doi: 10.1037/0022-3514.72.1.218
- Elliot, A. J., and Thrash, T. M. (2002). Approach-avoidance motivation in personality: approach and avoidance temperaments and goals. *J. Pers. Soc. Psychol.* 82, 804–818. doi: 10.1037/0022-3514.82.5.804
- Enders, C. K., and Bandalos, D. L. (2001). The relative performance of full information maximum likelihood estimation for missing data in structural equation models. *Struct. Equ. Modeling* 8, 430–457. doi: 10.1207/S15328007SEM0803_5
- Fletcher, K. L., Shim, S. S., and Wang, C. (2012). Perfectionistic concerns mediate the relationship between psychologically controlling parenting and achievement goal orientations. *Pers. Individ. Differ.* 52, 876–881. doi: 10.1016/j.paid.2012.02.001
- Foster, T. D., Froyen, L. C., Skibbe, L. E., Bowles, R. P., and Decker, K. B. (2016). Fathers' and mothers' home learning environments and children's early academic outcomes. *Read. Writ.* 29, 1845–1863. doi: 10.1007/s11145-016-9655-7
- Fredricks, J. A., Blumenfeld, P. C., and Paris, A. H. (2004). School engagement: potential of the concept, state of the evidence. *Rev. Educ. Research* 74, 59–109. doi: 10.3102/00346543074001059
- Garrett-Peters, P. T., Mokrova, I. L., Carr, R. C., Vernon-Feagans, L., and Family Life Project Key Investigators (2019). Early student (dis)engagement: contributions of household chaos, parenting, and self-regulatory skills. *Dev. Psychol.* 55, 1480–1492. doi: 10.1037/dev0000720
- Gershoff, E. T., Grogan-Kaylor, A., Lansford, J. E., Chang, L., Zelli, A., Deater-Deckard, K., et al. (2010). Parent discipline practices in an international sample: associations with child behaviors and moderation by perceived normativeness. *Child Dev.* 81, 487–502. doi: 10.1111/j.1467-8624.2009.01409.x
- Gonida, E. N., Kiosseoglou, G., and Voulala, K. (2007). Perceptions of parent goals and their contribution to student achievement goal orientation and engagement in the classroom: grade-level differences across adolescence. *Eur. J. Psychol. Educ.* 22, 23–39. doi: 10.1007/BF03173687
- Gonida, E. N., Voulala, K., and Kiosseoglou, G. (2009). Students' achievement goal orientations and their behavioral and emotional engagement: co-examining the role of perceived school goal structures and parent goals during adolescence. *Learn. Individ. Differ.* 19, 53–60. doi: 10.1016/j.lindif.2008.04.002
- Gonzalez-DeHass, A. R., Willems, P. P., and Holbein, M. F. D. (2005). Examining the relationship between parental involvement and student motivation. *Educ. Psychol. Rev.* 17, 99–123. doi: 10.1007/s10648-005-3949-7
- Grolnick, W. S. (2003). *The Psychology of Parental Control: How Well-Meant Parenting Backfires*. Mahwah, NJ: Erlbaum.
- Gurland, S. T., and Grolnick, W. S. (2005). Perceived threat, controlling parenting, and children's achievement orientations. *Motiv. Emot.* 29, 103–121. doi: 10.1007/s11031-005-7956-2
- Helwig, C. C., To, S., Wang, Q., Liu, C., and Yang, S. (2014). Judgments and reasoning about parental discipline involving induction and psychological control in China and Canada. *Child Dev.* 85, 1150–1167. doi: 10.1111/cdev.12183
- Hill, N. E., and Wang, M. T. (2015). From middle school to college: developing aspirations, promoting engagement, and indirect pathways from parenting to post high school enrollment. *Dev. Psychol.* 51, 224–235. doi: 10.1037/a0038367
- Hoff, E., Laursen, B., and Tardiff, T. (2002). "Socioeconomic status and parenting," in *Handbook of Parenting*, 2nd Edn, ed. M. H. Bornstein (Mahwah, NJ: Erlbaum), 231–252.
- Janosz, M., Archambault, I., Morizot, J., and Pagani, L. S. (2008). School engagement trajectories and their differential predictive relations to dropout. *J. Soc. Issues* 64, 21–40. doi: 10.1111/j.1540-4560.2008.00546.x
- Jeynes, W. H. (2015). A meta-analysis: the relationship between father involvement and student academic achievement. *Urban Educ.* 50, 387–423. doi: 10.1177/0042085914525789
- Joussemet, M., Landry, R., and Koestner, R. (2008). A self-determination theory perspective on parenting. *Can. Psychol.* 49, 194–200. doi: 10.1037/a0012754
- Juang, L. P., and Silbereisen, R. K. (2002). The relationship between adolescent academic capability beliefs, parenting and school grades. *J. Adolesc.* 25, 3–18. doi: 10.1006/jado.2001.0445
- Kaplan, A., and Maehr, M. L. (2007). The contributions and prospects of goal orientation theory. *Educ. Psychol. Rev.* 19, 141–184. doi: 10.1007/s10648-006-9012-5
- Khaleque, A. (2013). Perceived parental warmth, and children's psychological adjustment, and personality dispositions: a meta-analysis. *J. Child Fam. Stud.* 22, 297–306. doi: 10.1007/s10826-012-9579-z
- Kim, S. Y., and Wong, V. Y. (2002). "Assessing Asian and Asian American parenting: a review of the literature," in *Asian American Mental Health: Assessment Theories and Methods*, eds K. S. Kurasaki, S. Okazaki, and S. Sue (New York, NY: Kluwer Academic), 185–201. doi: 10.1007/978-1-4615-0735-2_13
- Kramer, K. Z. (2012). Parental behavioural control and academic achievement: striking the balance between control and involvement. *Res. Educ.* 88, 85–98. doi: 10.7227/RIE.88.1.8
- Laible, D. J., and Carlo, G. (2004). The differential relations of maternal and paternal support and control to adolescent social competence, self-worth, and sympathy. *J. Adolesc. Res.* 19, 759–782. doi: 10.1177/0743558403260094
- Lam, S. F., Jimerson, S., Kikas, E., Cefai, C., Veiga, F. H., Nelson, B., et al. (2012). Do girls and boys perceive themselves as equally engaged in school? the results of an international study from 12 countries. *J. Sch. Psychol.* 50, 77–94. doi: 10.1016/j.jsp.2011.07.004
- Larson, R., and Richards, M. H. (1994). *Divergent Realities: The Emotional Lives of Mothers, Fathers, and Adolescents*. New York, NY: Basic Books.
- Lau, K. L., and Lee, J. C. (2008). Validation of a Chinese achievement goal orientation questionnaire. *Br. J. Educ. Psychol.* 78, 331–353. doi: 10.1111/j.2044-8279.2008.tb00486.x
- Lawson, M. A., and Lawson, H. A. (2013). New conceptual frameworks for student engagement research, policy, and practice. *Rev. Educ. Res.* 83, 432–479. doi: 10.3102/0034654313480891
- Lee, J., Yu, H., and Choi, S. (2012). The influences of parental acceptance and parental control on school adjustment and academic achievement for South Korean children: the mediation role of self-regulation. *Asia Pac. Educ. Rev.* 13, 227–237. doi: 10.1007/s12564-011-9186-5
- Li, X., and Meier, J. (2017). Father love and mother love: contributions of parental acceptance to children's psychological adjustment. *J. Fam. Theory Rev.* 9, 459–490. doi: 10.1111/jftr.12227
- Li, Y., and Lerner, R. M. (2011). Trajectories of school engagement during adolescence: implications for grades, depression, delinquency, and substance use. *Dev. Psychol.* 47, 233–247. doi: 10.1037/a0021307
- Liem, A. D., Lau, S., and Nie, Y. (2008). The role of self-efficacy, task value, and achievement goals in predicting learning strategies, task disengagement, peer relationship, and achievement outcome. *Contemp. Educ. Psychol.* 33, 486–512. doi: 10.1016/j.cedpsych.2007.08.001
- Lowe, K., and Dotterer, A. M. (2013). Parental monitoring, parental warmth, and minority youths' academic outcomes: exploring the integrative model of parenting. *J. Youth Adolesc.* 42, 1413–1425. doi: 10.1007/s10964-013-9934-4
- Luo, W., Aye, K. M., Hogan, D., Kaur, B., and Chan, M. C. Y. (2013). Parenting behaviors and learning of Singapore students: the mediational role of achievement goals. *Motiv. Emot.* 37, 274–285. doi: 10.1007/s11031-012-9303-8
- Ma, H., Yao, M., and Ji, X. (2015). The influence of parent involvement on students' school engagement: a mediated moderation model. *Psychol. Dev. Educ.* 31, 710–718. doi: 10.16187/j.cnki.issn1001-4918.2015.06.10
- Martin, A., Ryan, R. M., and Brooks-Gunn, J. (2010). When fathers' supportiveness matters most: maternal and paternal parenting and children's school readiness. *J. Fam. Psychol.* 24, 145–155. doi: 10.1037/a0018073
- Maslowsky, J., Jager, J., and Hemken, D. (2015). Estimating and interpreting latent variable interactions: a tutorial for applying the latent moderated structural equations method. *Int. J. Behav. Dev.* 39, 87–96. doi: 10.1177/0165025414552301

- McKee, L., Roland, E., Coffelt, N., Olson, A. L., Forehand, R., Massari, C., et al. (2007). Harsh discipline and child problem behaviors: the roles of positive parenting and gender. *J. Fam. Violence* 22, 187–196. doi: 10.1007/s10896-007-9070-6
- Muller, D., Judd, C. M., and Yzerbyt, V. Y. (2005). When moderation is mediated and mediation is moderated. *J. Pers. Soc. Psychol.* 89, 852–863. doi: 10.1037/0022-3514.89.6.852
- Nelson, D. A., Hart, C. H., Yang, C., Olsen, J. A., and Jin, S. (2006). Aversive parenting in China: associations with child physical and relational aggression. *Child Dev.* 77, 554–572. doi: 10.1111/j.1467-8624.2006.00890.x
- Papadaki, E., and Giovazolias, T. (2015). The protective role of father acceptance in the relationship between maternal rejection and bullying: a moderated-mediation model. *J. Child Fam. Stud.* 24, 330–340. doi: 10.1007/s10826-013-9839-6
- Patall, E. A., Cooper, H., and Robinson, J. C. (2008). Parent involvement in homework: a research synthesis. *Rev. Educ. Res.* 78, 1039–1101. doi: 10.3102/0034654308325185
- Pellerone, M., Ramaci, T., and Miccichè, S. (2018). Identity, family, relationships among groups and socioeducational disadvantage as factors of school failure: a cross-sectional study in a group of junior high school students of the sicilian Hinterland. *World Futures* 74, 321–342. doi: 10.1080/02604027.2018.1492293
- Perris, C., Jacobsson, L., Linnström, H., Knorr, L. V., and Perris, H. (1980). Development of a new inventory for assessing memories of parental rearing behaviour. *Acta Psychiatr. Scand.* 61, 265–274. doi: 10.1111/j.1600-0447.1980.tb00581.x
- Pleck, J. H. (2007). Why could father involvement benefit children? Theoretical perspectives. *Appl. Dev. Sci.* 11, 196–202. doi: 10.1080/10888690701762068
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., and Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *J. Appl. Psychol.* 88, 879–903. doi: 10.1037/0021-9010.88.5.879
- Pomerantz, E. M., and Wang, Q. (2009). The role of parental control in children's development in Western and East Asian countries. *Curr. Direct. Psychol. Sci.* 18, 285–289. doi: 10.1111/j.1467-8721.2009.01653.x
- Preacher, K. J., Rucker, D. D., and Hayes, A. F. (2007). Addressing moderated mediation hypotheses: theory, methods, and prescriptions. *Multivariate Behav. Res.* 42, 185–227. doi: 10.1080/00273170701341316
- Prevatt, F. F. (2003). The contribution of parenting practices in a risk and resiliency model of children's adjustment. *Br. J. Dev. Psychol.* 21, 469–480. doi: 10.1348/02615100322535174
- Sangawi, H., Adams, J., and Reissland, N. (2015). The effects of parenting styles on behavioral problems in primary school children: a cross-cultural review. *Asian Soc. Sci.* 11, 171–186. doi: 10.5539/ass.v11n22p171
- Sarkadi, A., Kristiansson, R., Oberklaid, F., and Bremberg, S. (2008). Fathers' involvement and children's developmental outcomes: a systematic review of longitudinal studies. *Acta Paediatr.* 97, 153–158. doi: 10.1111/j.1651-2227.2007.00572.x
- Sayer, L. C., Bianchi, S. M., and Robinson, J. P. (2004). Are parents investing less in children? Trends in mothers' and fathers' time with children. *Am. J. Sociol.* 110, 1–43. doi: 10.1086/386270
- Schaufeli, W. B., Salanova, M., González-Romá, V., and Bakker, A. B. (2002). The measurement of engagement and burnout: a two sample confirmatory factor analytic approach. *J. Happiness Stud.* 3, 71–92. doi: 10.1023/A:1015630930326
- Shi, B. G., and Shen, J. L. (2007). The relationships among family SES, intelligence, intrinsic motivation and creativity. *Psychol. Dev. Educ.* 23, 30–34.
- Shim, S. S., Ryan, A. M., and Anderson, C. J. (2008). Achievement goals and achievement during early adolescence: examining time-varying predictor and outcome variables in growth-curve analysis. *J. Educ. Psychol.* 100, 655–671. doi: 10.1037/0022-0663.100.3.655
- Skinner, E. A., Kindermann, T. A., Connell, J. P., and Wellborn, J. G. (2009). "Engagement and disaffection as organizational constructs in the dynamics of motivational development," in *Handbook of Motivation in School*, eds K. Wentzel and A. Wigfield (New York, NY: Routledge), 223–245.
- Spera, C. (2005). A review of the relationship among parenting practices, parenting styles, and adolescent school achievement. *Educ. Psychol. Rev.* 17, 125–146. doi: 10.1007/s10648-005-3950-1
- Su, Y., Doerr, H. S., Spinath, F. M., Johnson, W., and Shi, J. (2015). The role of parental control in predicting school achievement independent of intelligence. *Learn. Individ. Differ.* 37, 203–209. doi: 10.1016/j.lindif.2014.11.023
- Trusty, J., and Lampe, R. E. (1997). Relationship of high-school seniors' perceptions of parental involvement and control to seniors' locus of control. *J. Couns. Dev.* 75, 375–384. doi: 10.1002/j.1556-6676.1997.tb02353.x
- Van Leeuwen, K. (1999). Het meten van opvoeding met de Schaal voor Ouderlijk Gedrag. [Measurement of parenting with the Parental Behavior Scale]. *Diagnostiek-Wijzer* 3, 151–170.
- Van Leeuwen, K. G., and Vermulst, A. A. (2004). Some psychometric properties of the Ghent parental behavior scale. *Eur. J. Psychol. Assess.* 20, 283–298. doi: 10.1027/1015-5759.20.4.283
- Vasquez, A. C., Patall, E. A., Fong, C. J., Corrigan, A. S., and Pine, L. (2016). Parent autonomy support, academic achievement, and psychosocial functioning: a meta-analysis of research. *Educ. Psychol. Rev.* 28, 605–644. doi: 10.1007/s10648-015-9329-z
- Walker, C. O., Greene, B. A., and Mansell, R. A. (2006). Identification with academics, intrinsic/extrinsic motivation, and self-efficacy as predictors of cognitive engagement. *Learn. Individ. Differ.* 16, 1–12. doi: 10.1016/j.lindif.2005.06.004
- Wang, M., Deng, X., and Du, X. (2018). Harsh parenting and academic achievement in Chinese adolescents: potential mediating roles of effortful control and classroom engagement. *J. Sch. Psychol.* 67, 16–30. doi: 10.1016/j.jsp.2017.09.002
- Wang, M., and Liu, L. (2014). Parental harsh discipline in mainland China: prevalence, frequency, and coexistence. *Child Abuse Negl.* 38, 1128–1137. doi: 10.1016/j.chiabu.2014.02.016
- Wang, M., Xu, W., and Wang, X. (2017). Parental harsh discipline and adolescents' academic achievement: mediating of self-disclosure. *Chin. J. Clin. Psychol.* 25, 684–690. doi: 10.16128/j.cnki.1005-3611.2017.04.021
- Wang, M. T., and Eccles, J. S. (2012). Adolescent behavioral, emotional, and cognitive engagement trajectories in school and their differential relations to educational success. *J. Res. Adolesc.* 22, 31–39. doi: 10.1111/j.1532-7795.2011.00753.x
- Wang, M. T., and Holcombe, R. (2010). Adolescents' perceptions of school environment, engagement, and academic achievement in middle school. *Am. Educ. Res. J.* 47, 633–662. doi: 10.3102/0002831209361209
- Wang, Q., Pomerantz, E. M., and Chen, H. (2007). The role of parents' control in early adolescents' psychological functioning: a longitudinal investigation in the United States and China. *Child Dev.* 78, 1592–1610. doi: 10.1111/j.1467-8624.2007.01085.x
- Wolters, C. A. (2004). Advancing achievement goal theory: using goal structures and goal orientations to predict students' motivation, cognition, and achievement. *J. Educ. Psychol.* 96, 236–250. doi: 10.1037/0022-0663.96.2.236
- Wu, D. Y. (1996). "Parental control: psychocultural interpretations of Chinese patterns of socialization," in *Growing Up the Chinese Way: Chinese Child and Adolescent Development*, ed. S. Lau (Hong Kong: Chinese University Press), 1–28.
- Yan, J., Schoppe-Sullivan, S. J., and Kamp Dush, C. M. (2018). Maternal coparenting attitudes and toddler adjustment: moderated mediation through father's positive engagement. *Parenting* 18, 67–85. doi: 10.1080/15295192.2018.1444130
- Yap, M. B. H., Pilkington, P. D., Ryan, S. M., and Jorm, A. F. (2014). Parental factors associated with depression and anxiety in young people: a systematic review and meta-analysis. *J. Affect. Disord.* 156, 8–23. doi: 10.1016/j.jad.2013.11.007

Conflict of Interest Statement: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2019 Wang, Shi, Yang, Zou, Zhang and Xu. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



Child and Adolescent Social Adaptive Functioning Scale: Factorial Invariance, Latent Mean Differences, and Its Impact on School Refusal Behavior in Spanish Children

Carolina González^{1*}, Cándido J. Inglés², Ainhoa Martínez-Palau¹, Ricardo Sanmartín^{1*}, María Vicent¹ and José M. García-Fernández¹

OPEN ACCESS

Edited by:

José Jesús Gázquez,
University of Almería, Spain

Reviewed by:

Cecilia María Ruiz Esteban,
University of Murcia, Spain
Nelly Nelly Lagos San Martín,
University of the Bio Bio, Chile

*Correspondence:

Carolina González
carolina.gonzalez@ua.es
Ricardo Sanmartín
ricardo.sanmartin@ua.es

Specialty section:

This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Psychology

Received: 24 April 2019

Accepted: 31 July 2019

Published: 14 August 2019

Citation:

González C, Inglés CJ,
Martínez-Palau A, Sanmartín R,
Vicent M and García-Fernández JM
(2019) Child and Adolescent Social
Adaptive Functioning Scale: Factorial
Invariance, Latent Mean Differences,
and Its Impact on School Refusal
Behavior in Spanish Children.
Front. Psychol. 10:1894.
doi: 10.3389/fpsyg.2019.01894

¹Department of Developmental Psychology and Didactics, University of Alicante, Alicante, Spain, ²Department of Health Psychology, Miguel Hernandez University of Elche, Elche, Spain

This study aims to examine the factorial invariance and latent mean differences across gender of the Spanish version of the Child and Adolescent Social Adaptive Functioning Scale (Study 1) and to value the function of social functioning as a protective ability of school refusal behavior (Study 2). Participants were Spanish students aged 8–12 years carefully chosen by simple random cluster, 345 for the first study ($M = 9.17$; $SD = 1.03$) and 1,032 students for the second study ($M = 10.02$; $SD = 1.77$). The measures used were the Child and Adolescent Social Adaptive Functioning Scale (CASAFS) and the School Refusal Assessment Scale-Revised (SRAS-R). Results about the validation of the scale supported the model proposed in this study for the CASAFS, with 15 items and a four-factor structure (school performance, peer relationships, family relationships, and home duties/self-care). Findings revealed invariance across gender for this model and good internal consistency levels were exhibited in each of the four dimensions of the CASAFS (0.76, 0.72, 0.74, and 0.71). Latent mean differences did not report differences between boys and girls. Regarding the second study, the social functioning acted as a protective factor of school refusal behavior by negatively and significantly predicting high scores in school refusal behavior due to anxiety symptoms or feelings of negative affect linked to the obligation to attend school. Opposite results were found for those students who justify their refusal to attend school in pursuing tangible reinforcements outside the school setting. These findings strengthen the reliability and validity of the CASAFS and the idea of social functioning as a person's ability which could prevent school refusal behavior is discussed.

Keywords: social functioning, validation, factorial invariance, latent mean differences, school refusal behavior, primary education, Spain

INTRODUCTION

Social functioning is understood as a set of different dimensions, known as social cognition, social skills and interactions, and social behaviors (Beauchamp and Anderson, 2010). Therefore, social functioning refers to a wide construct encompassing cognitive, emotional, and linguistic skills (Crowe et al., 2011). Social functioning difficulties are related with different sorts of psychological disorders, both internalizing problems such as depression (Vuthiarpa et al., 2012) or anxiety (Alfano, 2012; Essau et al., 2012), and externalizing problems such as conduct disorders (Renouf et al., 1997). Therefore, it is necessary to be able of using social functioning measures to identify social and adaptive functioning deficits in the early stages of human development. However, the development of measures evaluating social functioning through precise indicators has received scant attention. In this regard, the Child and Adolescent Social and Adaptive Functioning Scale (CASAFS; Spence et al., 2000) is a self-report measure specifically developed to examine the social and adaptive functioning of young people in the areas of school performance, peer relationship, family relationship, and home duties/self-care. Price et al. (2002) examined its psychometric properties in 1,478 Australian adolescents ($M = 12.85$; $SD = 0.54$). The results reported good internal consistency ($\alpha = 0.81$) and moderate test-retest reliability ($r = 0.58$) of the CASAFS. In this study, girls obtained significantly higher scores than boys on the peer relationships and the home duties/self-care subscales. Despite these findings, no further investigations have proved its psychometric properties in other cultures.

In recent years, social functioning has become more relevant due to its influence on social competence (McQuade et al., 2013), as well as on other variables related to the academic field such as school performance (Gutiérrez et al., 2011). A large number of investigations reveal a positive relationship between social-emotional competence and academic success (Miller et al., 2005; Talwar et al., 2017; Vicent et al., 2017). At the same time, there is empirical evidence to suggest that antisocial behavior is a statistically significant and positive predictor of school failure (Raine et al., 2006). This is why social functioning is considered as an important variable involved in school adaptation (Duncan et al., 2007; Furguerle and Graterol, 2010; Fernández-Zabala et al., 2016).

Despite the existing works about social functioning as a variable that facilitates an adequate socio-emotional adjustment, the theoretical revision shows the scarcity of works that have analyzed its role as a protective factor of school problems that affect the current society. School refusal behavior is included among the mentioned issues and it is referred to a child's refusal to go to school regularly or the persistent difficulty of staying in school (Kearney, 2016). In the last few years, most of the studies that have analyzed the relationship between school refusal and different personality traits and emotional states have chosen variables that fundamentally have a negative impact on school attendance problems. The findings of these studies reveal that school refusal is associated with higher scores in anxiety (Kearney and Albano, 2004;

González et al., 2018a), depression (Egger et al., 2003; González et al., 2018b) or pessimism (González et al., 2018c). However, this work pretends to analyze the impact of a variable, social functioning, whose high levels are expected to have a positive effect and lead to lower school refusal rates.

Few previous studies have considered the relationship between school refusal behavior and social functioning understood as a multidimensional construct that includes school performance, home duties/self-care, and the relationship with family and friends. In fact, just one has been recently found in which the relationship between four different school refusal behavior profiles and social functioning was analyzed (González et al., 2019). In this study, the non-school refusers group achieved the highest average scores in social functioning. On the other hand, other variables related to social functioning (e.g., social skills) have been analyzed in the field of school attendance problems. Specifically, Egger et al. (2003) noted that students who refuse to attend school or present anxiety disorders often have poor interpersonal relationships.

The consequences of not attending school on a long-term basis generate a decrease in the levels of social functioning (Havik et al., 2015). For this reason, individuals presenting school attendance problems are more prone to present problems during social situations, particularly when making and keeping friends (Wilson et al., 2008; Carroll, 2011; González et al., 2016). In this sense, there are studies that suggest that having good friends can prevent the appearance of school refusal (Shilvock, 2010; Havik et al., 2014). In addition, they prove that the difficulty of attending school could be caused by showing poor stability in different social situations (Havik et al., 2015).

Despite these gains, no previous studies have presented the Spanish validated version of the CASAFS or have analyzed the predictive capability of social functioning on school refusal behavior. These two limitations intend to be solved by this work. On the one hand, it will offer for the first time the validation of the CASAFS in a different cultural environment, specifically Spanish children. On the other hand, it will check the influence of social functioning on the manifestation of school non-attendance problems. Therefore, the purpose of the present study is twofold. First, it attempts to test the factorial invariance of the Spanish version of the CASAFS with Spanish children from third to six grade of Primary Education. Second, it purports to value the function of social functioning as a protective ability of school refusal behavior. In particular, this study aims (1) to check if it replicates the four-factor structure of the CASAFS, (2) to test its reliability, (3) to determine the factorial invariance of the CASAFS across gender, (4) to analyze the latent mean differences across gender, and (5) to determine the relationship between social functioning and school refusal behavior.

Taking into account the findings reported by previous studies, it is expected that:

Hypothesis 1. The Spanish version of the CASAFS presents the four-dimensional structure (Spence et al., 2000; Price et al., 2002).

Hypothesis 2. The Spanish version of the CASAFS obtains adequate coefficients of internal consistency in accordance with the previous studies (Spence et al., 2000; Price et al., 2002).

Hypothesis 3. It remains invariant across gender.

Hypothesis 4. It reports differences across gender with girls achieving higher social functioning scores than boys (Price et al., 2002).

Hypothesis 5. Students with high social functioning scores obtain the lowest scores in school refusal behavior (Duncan et al., 2007; Furguerle and Graterol, 2010; Fernández-Zabala et al., 2016).

Hypothesis 6. Social functioning acts as a statistically significant predictor in a negative sense of high scores in school refusal behavior (González et al., 2019).

STUDY 1

Validation, factorial invariance, and latent mean differences across gender for the CASAFS in Spanish children population.

Method

Participants

At the beginning, this study included 397 children recruited by random cluster sampling in the province of Alicante (geographical areas: center, north, south, east, and west). In the selection process, six urban and rural schools were chosen. Some of the initial sample participants were removed because they did not deliver the paternal consent to collaborate in the research ($N = 24$), they had omissions when completing the questionnaires ($N = 21$) and they had an insufficient language proficiency to understand the Spanish ($N = 17$). Thus, the final sample comprised a normative sample of 345 Spanish children aged 8–12 years ($M = 9.17$; $SD = 1.03$), of which 43.8% were boys and 56.2% were girls. Uniform distribution across gender and age was revealed according to the χ^2 test ($\chi^2 = 7.04$, $p = 0.07$).

Childhood socioeconomic status was determined according to parental occupation (employed or unemployed) and education background (primary, secondary or higher education). The sample included families with different socioeconomic status but with a predominance of middle-class children (67% employed families and 21% primary education; 48% secondary education; 31% higher education).

Measure

Child and Adolescent Social Adaptive Functioning Scale (CASAFS; Spence et al., 2000). The CASAFS is a self-report measure that assesses social functioning in children and adolescents understood as the degree to which an individual fulfills various roles in his or her life. This scale is composed

by 24 items distributed in four subscales: School Performance (SP; e.g., “I get good marks in social science and/or history”), Peer Relationships (PR; e.g., “I have at least one or two special friends”), Family Relationships (FR; e.g., “I get on well with my relatives”), and Home Duties/Self-care (HD; e.g., “I help with the cleaning up after meals”). Items are scored on a four-point Likert-type scale (1 = Never; 4 = Always). Family relationship items included a fifth scoring category stating “does not apply to me” in case of those individuals without siblings or one of their parents. The instrument has shown adequate levels of internal consistency (0.67–0.81) and a test-retest reliability with a 12-month interval of 0.48–0.63 (Price et al., 2002). Construct validity of this measure was supported by a negative and significant correlation found between the total CASAFS scores and total scores on the Beck Depression Inventory (BDI; Beck et al., 1961; Price et al., 2002).

The back-translation method was used to translate this scale to Spanish. First, the CASAFS items were translated from English to Spanish by a translator who was a native speaker with knowledge in the field and university studies in English translation. Then, the Spanish version of the CASAFS was translated back into the source language by an independent translator who was a native English speaker with Spanish knowledge and studies in Psychology. Finally, the two source-language versions were then compared.

Procedure

First, an interview was conducted with the principals of the centers explaining the aims of the investigation and describing the evaluation instrument. Once they accepted their participation, legal custodians were asked for the written informed consent. After collecting the authorizations during 2 weeks, students anonymously and collectively completed the instrument in a 20-min session during school hours, at least one of the researchers was always present to solve doubts. Once the instrument was applied, all the groups (students, families, teachers, and principals) were thanked for participating and the research group undertook to send a report with the results and orientations about educational support. Besides, the study followed the ethics standards established by the Declaration of Helsinki and the research study protocol was approved by the Ethical Committee of the University of Alicante (UA-2017-09-05).

Statistical Analyses

A Confirmatory Factorial Analysis (CFA) was carried out to test the dimensional structure of the CASAFS and consider its adequacy in Spanish children. The robust Maximum Likelihood method was used. No multivariate normality was identified according to Mardia's coefficient (17.57) (Bentler, 2005) and as a consequence, the Satorra-Bentler scaled χ^2 ($S-B\chi^2$) was used. Four goodness-of-fit indexes were considered: the Robust Root Mean Square Error of Approximation (R-RMSEA) with scores lower than 0.08 considered acceptable and lower than 0.06 excellent; the Robust Comparative Fit Index (R-CFI) with scores equal or greater than 0.90 considered acceptable and greater than 0.95 good fit; the Standardized

Root Mean Square Residual (SRMR) with scores close to 0.08 considered acceptable and lower than 0.05 good fit; and the Tucker Lewis Index (TLI) with scores equal or greater than 0.90 considered acceptable (Hu and Bentler, 1999; Brown, 2006). In addition, the internal consistency of the CASAFS was obtained through Cronbach's alpha coefficient and a classic item analysis was carried out.

Second, the configural, measurement and structural invariance of the own model of the CASAFS across gender was performed by Multigroup Confirmatory Factorial Analysis (MGCFA). In accordance with the scores obtained in the Mardia's coefficient (>5), the $S-B\chi^2$ was consequently used. Several hierarchical steps were followed and the goodness-of-fit indexes were calculated along with the following invariance criteria: the adjusted Satorra-Bentler Chi-square difference ($\Delta S-B\chi^2$: $p > 0.05$) and the ΔCFI ($\Delta CFI < 0.01$). The latent mean differences across gender were performed with the Critical Ratio statistic (CR). Statistical analyses were calculated using the IBM SPSS Statistics Base 22.0 and the multivariate software EQS 6.1.

Results

Confirmatory Factor Analysis and Reliability

Table 1 presents the CFA results for the original model and the own model proposed by this research group. It was the own model which reported the best goodness-of-fit indexes, which were higher than 0.90 for R-CFI (0.989) and TLI (0.986) and with an excellent value for R-RMSEA (0.016) and SRMR (0.065). This model supports the four-factor structure of the CASAFS after removing nine items and establishing item correlations. As a result, a final structure formed by 15 items of the CASAFS is proposed: School Performance (SP): 1, 5, 9, 13, and 21; Peer Relationships (PR): 14, 18, and 22; Family Relationships (FR): 7, 15, and 19; Home Duties/Self-care (HD): 8, 12, 16, and 24.

Cronbach's alpha values for each of the four factors were 0.76 (SP), 0.72 (PR), 0.74 (FR), and 0.71 (HD).

Classical Item Analysis

Item means ranged between 1.89 (item 5) and 2.76 (item 15) and the standard deviation ranged between 0.58 (item 15) and 1.04 (item 22). The item-test correlation coefficients ranged from 0.33 (item 14) to 0.57 (item 13). The items that did not reach a correlation coefficient of 0.30 were deleted. Thus, the CASAFS is composed by 15 items related to the functioning and social adaptation of children.

The items-subscales correlation coefficients ranged from 0.61 (item 9) to 0.76 (item 13) in the first factor (SP), from 0.65 (item 14) to 0.73 (item 22) in the second factor (PR), from 0.71 (item 19) to 0.76 (item 15) in the third factor (FR), and from 0.59 (item 16) to 0.80 (item 12) in the fourth factor (HD). The internal consistency (Cronbach's alpha) of the questionnaire, if an item is removed, oscillates between 0.70 and 0.72.

Factorial Validity and Invariance Across Gender

Table 2 shows the measurement and structural invariance across gender by performing different multigroup analyses. The baseline model (Model 0), with no constraints, revealed adequate goodness-of-fit for the TLI, R-CFI, R-RMSEA, and SRMR indexes. The model 1, obtained after imposing constraints in the factor loadings of Model 0, revealed acceptable goodness-of-fit indexes also. Consecutively, the equality of intercepts was fixed in Model 1 and a new model was obtained (Model 2) with adequate goodness-of-fit indexes. The strict invariance, represented by the Model 3 obtained satisfactory goodness-of-fit indexes also concluding thus the measurement invariance. Finally, the structural invariance (Model 4), which constrains the variances and covariances of factors in Model 2, obtained satisfactory goodness-of-fit indexes. All the $\Delta S-B\chi^2$ of the different models showed no statistically significant differences ($p > 0.05$), and the ΔCFI values were lower than 0.01. These data confirm the measurement and structural invariance of the CASAFS across gender.

Latent Mean Differences Across Gender

To compare the differences in social functioning across gender, boys acted as the gender reference group (see **Table 3**). Reasonable goodness-of-fit indexes were obtained for both groups across gender ($\chi^2 = 267.016$, d.f. = 182, $p < 0.000$, R-CFI = 0.929, R-RMSEA = 0.037, CI = 0.016–0.052, and SRMR = 0.077). Not statistically significant differences were found across gender in the CASAFS scores.

Discussion

The aim of the first study was to carry out the validation of the CASAFS in a sample of Spanish children. As expected, the CFA supported the four-factor structure of the scale (Hypothesis 1), coinciding with the previous models (Spence et al., 2000; Price et al., 2002). Regarding the reliability, the second hypothesis was confirmed because the CASAFS reported adequate levels of reliability, which ranged from 0.76 (SP) to 0.71 (HD). In this sense, these values are considered to

TABLE 1 | Confirmatory factor analyses: goodness-of-fit indexes of the statistic models of the CASAFS.

	S-B χ^2	df	R-RMSEA 90% CI	SRMR	R-CFI	TLI
Original model	355.9596	246	0.051 (0.039, 0.062)	0.083	0.818	0.796
Own model	83.4619	80	0.016 (0.000, 0.046)	0.065	0.989	0.986

Original model: Price et al. (2002); S-B χ^2 , Satorra-Bentler scaled χ^2 ; df, degrees of freedom; R-RMSEA, robust root mean square error of approximation; CI, confidence interval; SRMR, standardized root mean square residual; R-CFI, robust comparative fit index; TLI, Tucker Lewis index.
 $p < 0.001$ for S-B χ^2 in all cases.

TABLE 2 | Goodness-of-fit indexes for the own model of the CASAFS depending on gender.

	χ^2	S-B χ^2	df	TLI	R-CFI	R-RMSEA	SRMR	$\Delta S-B\chi^2$ (Δdf , p)	ΔCFI
Boys	95.866	81.5334	80	0.989	0.991	0.016 (0.000, 0.068)	0.066		
Girls	118.894	91.7004	80	0.902	0.925	0.039 (0.000, 0.071)	0.077		
Model 0	214.773	175.1688	160	0.940	0.954	0.024 (0.000, 0.043)	0.072		
Model 1	227.068	182.8608	171	0.952	0.961	0.021 (0.000, 0.041)	0.072	8.36 (11, 0.680)	0.007
Model 2	232.496	190.3151	186	0.938	0.952	0.017 (0.000, 0.039)	0.072	5.48 (15, 0.987)	-0.009
Model 3	254.095	206.8305	205	0.949	0.959	0.014 (0.000, 0.036)	0.078	16.67 (19, 0.613)	0.007
Model 4	238.373	197.0030	196	0.954	0.961	0.014 (0.000, 0.036)	0.078	5.91 (10, 0.823)	0.009

Model 0 = free model; Model 1 = Model 0 with factor loadings; Model 2 = Model 1 with intercepts; Model 3 = Model 2 with error variances; Model 4 = Model 2 with variances and covariance factors; S-B χ^2 , Satorra-Bentler χ^2 scaled; df, degrees of freedom; TLI, Tucker-Lewis index; R-CFI, robust comparative fit index; R-RMSEA, robust root mean square error of approximation; SRMR, standardized root mean square residual; ΔCFI , comparative fit index difference test; $\Delta S-B\chi^2$, χ^2 difference model comparison test; Δdf , difference between degrees of freedom.

TABLE 3 | Latent mean differences across gender in the CASAFS.

	CASAFS			
	SP	PR	FR	HD
Boys (reference)				
Girls				
Mean estimate (ME)	-0.008	-0.019	-0.016	0.131
Standard error (SE)	0.099	0.066	0.083	0.116
Critical ratio (CR)	-0.085	-0.287	-0.191	1.126

SP, school performance; PR, peer relationship; FR, family relationship; HD, home duties/self-care.

be acceptable because they are equal or greater than 0.70 according to Prieto and Delgado (2010). In addition, the MCFA confirmed the configural, measurement, and structural invariance of the proposed model by this research for the CASAFS across gender, so the third hypothesis was also accepted. With regard to the results about the latent mean differences across gender, initial expectations have not been met (Hypothesis 4). In this study, no significant differences were found between boys and girls in social functioning. Despite relatively few studies that have analyzed the differences across gender in social functioning, higher scores were associated to girls (Price et al., 2002; Bree, 2004). However, these findings might be justified by the fact that in previous studies these differences were examined with adolescents' samples whereas in this investigation are children. Moreover, the school and family environment of the children of the current research could explain these results.

STUDY 2

Social functioning as a protective factor of school refusal behavior: mean differences and predictive capability.

Method

Participants

The sample was recruited by random cluster sampling in four Spanish cities: Alicante, Albacete, Murcia, and Seville. Five different geographical areas were considered (center, north, south, east, and west) in the selection process. Finally, 16 town and

rural schools were chosen (11 public, 3 concerted, and 2 private schools), in which four classes per center were randomly selected and an average participation rate of 61 students per school was reached.

The final sample included a normative sample of 1,032 students, after excluding 62 contributions for presenting mistakes and omissions during the fulfillment of the tests or for not having the written consent of their legal tutors. Ages of these participants ranged from 8 to 12 years ($M = 10.02$; $SD = 1.77$). Uniform distribution across gender and age was revealed according to the χ^2 test for uniform ($\chi^2 = 3.04$, $p = 0.31$).

The socioeconomic status was determined according to parental occupation (employed or unemployed) and education background (primary, secondary or higher education). The sample included families with different socioeconomic status but with a predominance of middle-class children (73% employed families and 26% primary education; 51% secondary education; 33% higher education).

Measures

Child and Adolescent Social Adaptive Functioning Scale (CASAFS; Spence et al., 2000). Its characteristics and psychometric properties have been explained before. In this study, the coefficients of internal consistency were 0.75 (SP), 0.70 (PR), 0.71 (FR), and 0.73 (HD) for each of the four factors, respectively.

School Refusal Assessment Scale-Revised (SRAS-R; Kearney, 2002). The SRAS-R is a self-report measure designed to identify the primary function that explains school refusal behavior through four dimensions: I. Avoidance of stimuli that provoke negative affectivity (e.g., "How often do you stay away from school because you will feel sad or depressed if you go?"), II. Escape from aversive social and/or evaluative situations (e.g., "How often do you stay away from places in school (e.g., hallways, places where certain groups of people are) where you would have to talk to someone?"), III. Pursuit of attention from significant others (e.g., "How much would you rather be with your family than go to school?"), and IV. Pursuit of tangible reinforcement outside of school (e.g., "When you are not in school during the week (Monday to Friday), how often do you leave the house and do something fun?"). The SRAS-R includes 24 items with a seven-point Likert-type scale (0 = Never; 6 = Always). Both the original and revised version have

demonstrated adequate psychometric properties obtaining Cronbach alpha values for the SRAS-R that ranged from 0.74 (Factor IV) to 0.87 (Factor III) (Kearney, 2006).

In this study, the Spanish version of the SRAS-R was used with a structure of 18 items divided into the four factors mentioned above (González et al., 2016). Adequate coefficients of internal consistency were found with a range from 0.70 (Factor I) to 0.87 (Factor III). Correlation coefficients of scores of the SRAS-R revealed a predictable pattern between school refusal behavior and positive/negative affect and optimism/pessimism. Specifically, González et al. (2016) revealed positive and significant correlations between the first three factors and the total score of the SRAS-R with negative affect and pessimism. In this study, the coefficients of internal consistency were 0.77 (Factor I), 0.78 (Factor II), 0.73 (Factor III), and 0.71 (Factor IV) for each of the four dimensions, respectively.

Procedure

First, an interview with the principals of the centers was carried out and written informed consent was requested from the parents. Participants anonymously and collectively completed the instruments in a 45-min session during school hours (5 min presentation and detailed guidance to complete the instruments, 15–20 min the CASAFS, and 15–20 min the SRAS-R).

Statistical Analyses

The Student's *t* test was used to examine the differences in the mean scores of students with high and low school refusal behavior depending on the social functioning. In accordance with the values proposed by Cohen (1988) to interpret the magnitude of the effect sizes, three levels were differentiated: small ($0.20 < d < 0.50$), moderate ($0.51 < d < 0.79$), and large ($d \geq 0.80$).

Binary logistic regression process was used to analyze the predictive capability of the social functioning on high scores in school refusal behavior. The OR statistic based on Wald's statistic was used to interpret the results: scores greater than one showed a positive prediction, scores smaller than one indicated negative predictions, and scores equal to one showed no prediction. In this case, only the IBM SPSS Statistics Base 22.0 was used.

Results

Mean Differences

Differentiating between students with high and low school refusal behavior scores, **Table 4** presents the mean scores of these two groups across social functioning. Students with low scores in the first three factors of the SRAS-R obtained higher scores in three dimensions of social functioning (school performance, peer relationships, and family relationships) than their peers with high scores. The magnitude of the differences found were small and moderate, ranging between 0.22 and 0.73.

In contrast to these findings, students with high scores in school refusal behavior for the fourth factor (IV. tangible reinforcements) achieved higher scores in the four dimensions of social functioning than their companions with low scores, and the size of the differences found was large for the subscales school performance and peer relationships ($d = 0.85$, $d = 0.95$, respectively), moderate for family relationships ($d = 0.55$), and small for home duties/self-care ($d = 0.40$).

Predictive Capability

Logistic regression results are presented in **Table 5**. The percentage of cases correctly classified ranged from 63% ($\chi^2 = 30.58$; $p = <0.001$) for the third factor of the SRAS-R to 78.6%

TABLE 4 | Differences in social functioning in students with high and low scores in school refusal.

Variables		Levene's test		Low score		High score		Statistics			
		<i>F</i>	<i>p</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
SP	I SRAS-R	0.69	0.405	15.31	2.88	13.16	3.04	9.97	760	<0.001	0.73
	II SRAS-R	21.87	0.000	15.09	2.64	14.05	3.22	9.30	663.89	<0.001	0.35
	III SRAS-R	0.41	0.519	15.25	2.96	14.00	3.09	5.09	628	<0.001	0.41
	IV SRAS-R	4.41	0.036	12.92	2.63	15.25	2.80	-9.28	290.04	<0.001	0.85
PR	I SRAS-R	0.44	0.504	15.29	3.18	14.21	2.95	4.87	760	<0.001	0.35
	II SRAS-R	9.82	0.002	15.83	2.73	14.05	3.22	7.86	683.80	<0.001	0.59
	III SRAS-R	0.09	0.753	15.56	3.11	14.63	3.08	3.71	628	<0.001	0.30
	IV SRAS-R	0.52	0.468	13.42	2.55	16.11	2.91	-10.18	586	<0.001	0.95
FR	I SRAS-R	18.69	0.000	16.24	2.52	14.57	2.95	8.39	755.50	<0.001	0.61
	II SRAS-R	25.80	0.000	16.18	2.47	14.21	3.25	8.97	666.10	<0.001	0.68
	III SRAS-R	0.11	0.744	15.81	2.92	15.18	2.89	2.71	628	<0.001	0.22
	IV SRAS-R	28.85	0.000	15.00	2.83	16.31	2.20	-5.26	226.18	<0.001	0.55
HD	I SRAS-R	1.14	0.286	14.44	4.49	13.90	4.24	1.68	760	0.092	–
	II SRAS-R	2.05	0.152	14.70	4.52	13.90	4.17	2.44	688	0.015	0.18
	III SRAS-R	0.14	0.702	14.31	4.45	14.27	4.60	0.10	628	0.914	–
	IV SRAS-R	1.51	0.220	13.84	4.33	15.38	3.68	-4.26	586	<0.001	0.40

SP, school performance; PR, peer relationships; FR, family relationships; HD, home duties/self-care; SRAS-R, school refusal assessment scale-revised; I SRAS-R, avoidance of stimuli that provoke negative affectivity; II SRAS-R, escape from aversive social and/or evaluative situations; III SRAS-R, pursuit of attention from significant others; IV SRAS-R, pursuit of tangible reinforcement outside of school.

TABLE 5 | Logistic regression model for the probability of presenting high school refusal behavior depending on the social functioning.

SRAS-R	CASAFS	χ^2	R^2	B	ET	Wald	p	OR	CI 95%
I SRAS-R	Correctly classified: 66.9%	117.01	0.19						
	SP			-0.19	0.03	45.43	<0.001	0.82	0.77–0.87
	FR			-0.15	0.03	22.36	<0.001	0.86	0.81–0.92
	Constant			5.18	0.55	88.31	<0.001	178.42	
II SRAS-R	Correctly classified: 64.9%	121.57	0.22						
	SP			-0.15	0.03	24.86	<0.001	0.86	0.81–0.91
	PR			-0.11	0.03	13.13	<0.001	0.90	0.85–0.95
	FR			-0.13	0.04	14.19	<0.001	0.88	0.82–0.94
	Constant			5.78	0.60	91.95	<0.001	326.34	
III SRAS-R	Correctly classified: 63%	30.58	0.07						
	SP			-0.11	0.03	16.12	<0.001	0.89	0.84–0.94
	FR			-0.06	0.03	4.65	0.031	0.94	0.89–0.99
	Constant			2.99	0.52	32.85	<0.001	19.86	
IV SRAS-R	Correctly classified: 78.6%	139.00	0.31						
	SP			0.26	0.05	31.94	<0.001	1.29	1.18–1.41
	PR			0.29	0.04	50.14	<0.001	1.33	1.23–1.45
	FR			-0.11	0.06	4.19	0.041	0.89	0.80–0.99
	HD			0.07	0.03	6.89	0.009	1.07	1.01–1.39
	Constant			-6.22	0.81	58.28	<0.001	0.01	

SP, school performance; PR, peer relationships; FR, family relationships; HD, home duties/self-care; SRAS-R, school refusal assessment scale-revised; I SRAS-R, avoidance of stimuli that provoke negative affectivity; II SRAS-R, escape from aversive social and/or evaluative situations; III SRAS-R, pursuit of attention from significant others; IV SRAS-R, pursuit of tangible reinforcement outside of school.

($\chi^2 = 139.00$; $p = <0.001$) for the fourth factor of the SRAS-R. Besides, R^2 de Nagelkerke ranged between 0.07 (Factor III) and 0.31 (Factor IV).

The value of the OR revealed that two dimensions of social functioning (school performance and family relationships) acted as negative predictors of high scores in school refusal behavior for the factors I, II, and III of the SRAS-R. Similarly, peer relationship also acted as a negative and statistically significant predictor of high scores in school refusal behavior but only for the second factor of the SRAS-R.

With regard to the fourth subscale of school refusal behavior, the dimensions of school performance, peer relationships, and home duties/self-care acted as positive and statistically significant predictors of high scores for this factor. Thus, for each point that the scores increased in those dimensions the probability of presenting high school refusal behavior based on pursuing tangible reinforcements outside of school was increased. In contrast, the family relationship dimension acted as a negative and significant predictor of high scores based on the fourth factor of the SRAS-R with a value for the OR of 0.89.

Discussion

In the second study, the aim was to determine the role of social functioning as a protective factor of school refusal behavior. Specifically, we examined the differences in the mean scores of students with high and low school refusal behavior depending on the social functioning and analyzed the predictive capability of the social functioning on high scores in school refusal behavior.

The results found supported the hypotheses formulated for the first three factors of SRAS-R, finding that socially skillful behavior acts as a protective factor of school refusal behavior.

However, the evidence found did not support the initial hypotheses for the fourth factor.

On the one hand, those students who experience negative emotions and affectivity (anxiety, social anxiety, separation anxiety or fear of negative evaluation) to the obligation to attend school have reported lower scores on social functioning. Specifically, those students with high scores in school refusal behavior based on the first three factors of SRAS-R, which are associated with feelings of negative affectivity, social anxiety, evaluation worries, and pursuing attention, showed low scores in the following dimensions of social functioning: school performance, peer relationships, and family relationships. These results are in accordance with the fifth hypothesis. In turn, these dimensions of social functioning acted as negative predictors of high scores in school refusal behavior, confirming the sixth hypothesis. These findings are in line with results by González et al. (2019), who identified that school refusers by mixed reinforcement profile, characterized by high scores in the first three factors of the SRAS-R, scored the lowest scores on social functioning in comparison with the rest of profiles. It is common for students with this type of school refusal to experience difficulties in social interaction, expressing poor interpersonal skills, and avoiding aversive social situations or evaluations (Egger et al., 2003; Kearney and Albano, 2004; Jones and Suveg, 2015). In these cases, the acquisition of skills that promote effective social behavior would act as a positive factor against school refusal.

On the other hand, children who refuse to attend school because of pursuing tangible reinforcements outside the school (Factor IV) got opposite results. In this case, students with high school refusal behavior scored higher on all the dimensions of social functioning. Besides, logistic analyses revealed that three of the dimensions that formed part of the social functioning construct (school performance, peer relationships, and home

duties/self-care) acted as positive predictors of high scores in school refusal behavior. This result is also consistent with González et al. (2019) findings in which the school refusal behavior profile with high scores in the fourth factor of the SRAS-R obtained together with the non-refusal group the highest scores in social functioning. However, having not found more previous investigations in this field, it is necessary to expand the research in order to check which perception of reality these students show and contrast it through multi-source studies including teachers and relatives. With this type of works, responses based on thoughts that do not fit with the real context could be detected and alternative explanations could be proposed (Holmbeck et al., 2002). On the contrary, the probability of presenting high scores in school refusal for the fourth factor was lower as scores increased in family relationships. In this case, the consolidation of a favorable relationship with family members would act as a protective factor of school refusal, coinciding with those investigations that highlight the protective influence exerted by an adequate family context (parenting style, family structure, and climate) on school refusal (Bahali et al., 2011; Carless et al., 2015).

CONCLUSIONS

Scientific literature review indicates the need to validate specific instruments that evaluate the adaptive social functioning in new cultural contexts (Price et al., 2002). In this sense, the present investigation offers the first Spanish validation of the CASAFS and demonstrates the solvency and effectiveness of this scale to assess this variable in Spanish children population. Moreover, this study is framed within a new perspective that seeks to identify which factors act as protectors of school refusal behavior. The negative to attend school has been commonly associated with internalizing problems such as anxiety or depression (Heyne et al., 2011; Richards and Hadwin, 2011; González et al., 2018a,b), externalizing problems such as disruptive behaviors (Egger et al., 2003; Maynard et al., 2012) and low academic performance (Barry et al., 2010; Yahaya et al., 2010; Thornton et al., 2013). From these data, the interest in detecting those variables that negatively affect students who refuse or show difficulties to attend school is evident. However, this study pretended to overcome this view by offering the first results about the role of social functioning as a protective factor of school refusal behavior.

Despite these findings, this study has some limitations that must be mentioned. First, for achieving a more exhaustive validation of the CASAFS, additional studies are required to verify the temporal stability of this measure and the convergence validity between this scale and other similar instruments. Second, the little scientific research evaluating the relationship between social functioning and school refusal behavior does not allow generalizing these findings. Therefore, it is necessary that future studies expand the study of the relationship between these variables in order to provide greater consistency and validity to the results found. In addition, this study only analyzes information provided by

students through two self-report measures. In order to avoid responses conditioned by the subjective view of the students, it is proposed that future works include opinions of teachers and parents as well as the use of different evaluation tools (e.g., interviews or observational instruments). On the other hand, although the number of participants constitutes a representative sample of the stage of primary education, it is not possible to generalize the results obtained to other ages. Therefore, it is proposed to develop future analysis in higher educational stages. Additionally, this study was carried out with students who regularly attend school. This preventive approach is useful but it would be interesting comparing these findings with students who have school attendance problems. Other relevant academic factors such as school performance and school attendance rates should be considered in future works to evaluate their impact on school refusal behavior. Finally, it would be convenient to carry out longitudinal studies that allow knowing the evolution of these results over time.

Practical implications for the health educational and psychological field are derived from the results obtained. Regarding the assessment, this study provides the first validation of the CASAFS in Spanish language. Therefore, it offers a specific instrument to evaluate the social functioning skills as a prevention mechanism because several studies have suggested that deficits in social functioning are associated with psychological problems such as anxiety, depression or conduct disorders (Alfano, 2012; Essau et al., 2012; Vuthiarpa et al., 2012; García-Fernández et al., 2017). It is important, as Price et al. (2002) indicate, that reliable and valid assessment tools for social functioning are developed. In this line, early detection of deficits in social and adaptive functioning is essential to offer the more appropriate intervention strategies. With regard to school refuser students, for those students who base their refusal to attend school on feelings of negative affectivity, it is proposed the application of programs aimed at improving the emotional regulation (e.g., FORTIUS Program, Méndez et al., 2012) and social performance in young people (e.g. PEHIA Program, Inglés, 2009). On the other hand, for those students with high scores in school refusal behavior based on pursuing external reinforcements (going out with friends, staying at home playing, etc.), it is necessary to analyze how these subjects interpret their behaviors and orient them in the control and rational knowledge of the emotions generated (Inglés et al., 2015; Vicent et al., 2016). In all cases, both feelings and emotions must be properly regulated in order to improve tolerance to frustration, avoid negative emotional states, and regulate impulsivity in order to achieve adequate social functioning (Heerdink et al., 2015; Domitrovich et al., 2017; Rapp et al., 2017).

DATA AVAILABILITY

The datasets for this manuscript are not publicly available because the datasets generated for this study are available on request to the corresponding author. Requests to access the datasets should be directed to carolina.gonzalez@ua.es.

ETHICS STATEMENT

The study followed the ethics standards established by the Declaration of Helsinki and the research study protocol was approved by the Ethical Committee of the University of Alicante (UA-2017-09-05).

AUTHOR CONTRIBUTIONS

CG has participated conducting a literature review and writing this manuscript. CI has participated drafting the work and revising it critically for important intellectual content in all

its phases. AM-P has participated conducting a literature review and writing this manuscript. RS has participated performing statistical analyses. MV has made substantial contributions in the design and interpretation of the data. JG-F has designed this research and participated performing statistical analyses.

FUNDING

Part of this research has been financed by a project of the Ministry of Economy and Competitiveness (EDU2012-35124) awarded to JG-F and the project GV/2019/075 awarded to CG.

REFERENCES

- Alfano, C. A. (2012). Are children with “pure” generalized anxiety disorder impaired? A comparison with comorbid and healthy children. *J. Clin. Child Adolesc. Psychol.* 41, 739–745. doi: 10.1080/15374416.2012.715367
- Bahali, K., Tahiroglu, A. Y., and Seydaoğlu, G. (2011). Parental psychological symptoms and familial risk factors of children and adolescents who exhibit school refusal. *East Asian Arch. Psychiatry* 21, 164–169.
- Barry, A. E., Chaney, B., and Chaney, D. (2010). The impact of truant and alcohol-related behaviour on educational aspirations: a study of US high school senior. *J. Sch. Health* 81, 485–492. doi: 10.1111/j.1746-1561.2011.00618.x
- Beauchamp, M. H., and Anderson, V. (2010). Social: an integrative framework for the development of social skills. *Psychol. Bull.* 136, 39–64. doi: 10.1037/a0017768
- Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., and Erbaugh, J. (1961). An inventory for measuring depression. *Arch. Gen. Psychiatry* 4, 561–571. doi: 10.1001/archpsyc.1961.01710120031004
- Bentler, P. M. (2005). *EQS 6.1: Structural equations program manual*. Encino, CA: Multivariate Software, Inc.
- Bree, C. (2004). Basic psychometric properties of the child social functioning inventory. Doctoral thesis. The United States: University of Maryland.
- Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. New York: Guilford Press.
- Carless, B., Melvin, G. A., Tonge, B. J., and Newman, L. K. (2015). The role of parental self-efficacy in adolescent school-refusal. *J. Fam. Psychol.* 29, 162–170. doi: 10.1037/fam0000050
- Carroll, H. C. M. (2011). The peer relationships of primary school pupils with poor attendance records. *Educ. Stud.* 37, 197–206. doi: 10.1080/03055698.2010.510240
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. 2nd Edn. Hillsdale, NJ: Erlbaum.
- Crowe, L. M., Beauchamp, M. H., Catroppa, C., and Anderson, V. (2011). Social function assessment tools for children and adolescents: a systematic review from 1988 to 2010. *Clin. Psychol. Rev.* 5, 767–785. doi: 10.1016/j.cpr.2011.03.008
- Domitrovich, C. E., Durlak, J. A., Staley, K. C., and Weissberg, R. P. (2017). Social-emotional competence: an essential factor for promoting positive adjustment and reducing risk in school children. *Child Dev.* 88, 1–9. doi: 10.1111/cdev.12739
- Duncan, G. J., Dowsett, C. J., Claessens, A., Magnuson, K., Huston, A. C., Klebanov, P., et al. (2007). School readiness and later achievement. *Dev. Psychol.* 43, 1428–1446. doi: 10.1037/0012-1649.43.6.1428
- Egger, H. L., Costello, J., and Angold, A. (2003). School refusal and psychiatric disorders: a community study. *J. Am. Acad. Child Adolesc. Psychiatry* 42, 797–807. doi: 10.1097/01.CHL.0000046865.56865.79
- Essau, C. A., Conradt, J., Sasagawa, S., and Ollendick, T. H. (2012). Prevention of anxiety symptoms in children: results from a universal school-based trial. *Behav. Ther.* 43, 450–464. doi: 10.1016/j.beth.2011.08.003
- Fernández-Zabala, A., Goñi, E., Camino, I., and Zulaika, L. M. (2016). Family and school context in school engagement. *Eur. J. Psychol. Educ.* 9, 47–55. doi: 10.1016/j.ejeps.2015.09.001
- Furguerle, J., and Graterol, C. T. (2010). Habilidades sociales para el fortalecimiento del trabajo en equipo en las organizaciones educativas [Social skills for strengthening teamwork in educational organizations]. *Rev. Electrón. UVM* 4, 216–228.
- García-Fernández, J. M., Vicent, M., Inglés, C. J., González, C., and Sanmartín, R. (2017). Relationship between socially prescribed perfectionism and aggressive behaviour during late childhood. *Eur. J. Psychol. Educ.* 10, 15–22. doi: 10.1016/j.ejeps.2016.10.003
- González, C., Inglés, C. J., Kearney, C. A., Sanmartín, R., Vicent, M., and García-Fernández, J. M. (2019). Relationship between school refusal behavior and social functioning: a cluster analysis approach. *Eur. J. Psychol. Educ.* 12, 17–29. doi: 10.30552/ejep.v12i1.238
- González, C., Inglés, C. J., Kearney, C. A., Vicent, M., Sanmartín, R., and García-Fernández, J. M. (2016). School refusal assessment scale-revised: factorial invariance and latent means differences across gender and age in Spanish children. *Front. Psychol.* 7, 1–10. doi: 10.3389/fpsyg.2016.02011
- González, C., Inglés, C. J., Sanmartín, R., Vicent, M., Fernández-Sogorb, A., and García-Fernández, J. M. (2018a). A cluster analysis of school refusal behavior: identification of profiles and risk for school anxiety. *Int. J. Educ. Res.* 90, 43–49. doi: 10.1016/j.ijer.2018.05.006
- González, C., Inglés, C. J., Sanmartín, R., Vicent, M., Gisbert, B., and García-Fernández, J. M. (2018c). Youth life orientation test-Spanish version: factorial invariance, latent mean differences and effects on school refusal. *Sch. Ment. Heal.* 10, 477–487. doi: 10.1007/s12310-018-9266-3
- González, C., Kearney, C. A., Jiménez-Ayala, C. E., Sanmartín, R., Vicent, M., Inglés, C. J., et al. (2018b). Functional profiles of school refusal behavior and their relationship with depression, anxiety and stress. *Psychiatry Res.* 269, 140–144. doi: 10.1016/j.psychres.2018.08.069
- Gutiérrez, M., Escartí, A., and Pascual, C. (2011). Relaciones entre empatía, conducta prosocial, agresividad, autoeficacia y responsabilidad personal y social de los escolares [Relationships between empathy, prosocial behavior, aggressiveness, self-efficacy and personal and social responsibility of school children]. *Psicothema* 23, 13–19.
- Havik, T., Bru, E., and Ertesvag, S. K. (2014). Parental perspectives of the role of school factors in school refusal. *Emot. Behav. Diffic.* 19, 131–153. doi: 10.1080/13632752.2013.816199
- Havik, T., Bru, E., and Ertesvag, S. K. (2015). School factors associated with school refusal and truancy related reasons for school non-attendance. *Soc. Psychol. Educ.* 18, 221–240. doi: 10.1007/s11218-015-9293-y
- Heerdink, M. W., van Kleef, G. A., Homan, A. C., and Fischer, A. H. (2015). Emotional expressions as social signals of rejection and acceptance: evidence from the affect misattribution paradigm. *J. Exp. Soc. Psychol.* 56, 60–68. doi: 10.1016/j.jesp.2014.09.004
- Heyne, D., Sauter, F. M., van Widenfelt, B. M., Vermeiren, R., and Westenberg, P. M. (2011). School refusal and anxiety in adolescence: non-randomized trial of a developmentally sensitive cognitive behavioral therapy. *J. Anxiety Disord.* 25, 870–878. doi: 10.1016/j.janxdis.2011.04.006
- Holmbeck, G. N., Li, S. T., Schurman, J. V., Friedman, D., and Coakley, R. M. (2002). Collecting and managing multisource and multimethod data in studies of pediatric populations. *J. Pediatr. Psychol.* 27, 5–18. doi: 10.1093/jpepsy/27.1.5

- Hu, L., and Bentler, P. M. (1999). Cut-off criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Struct. Equ. Model.* 6, 1–55. doi: 10.1080/10705519909540118
- Inglés, C. J. (2009). *Programa PEHIA: Enseñanza de habilidades interpersonales para adolescentes [PEHIA program: Teaching interpersonal skills for teens]*. 3rd Edn. Madrid, Spain: Pirámide.
- Inglés, C. J., González, C., García-Fernández, J. M., Vicent, M., and Martínez-Monteagudo, M. C. (2015). Current status of research on school refusal. *Eur. J. Psychol. Educ.* 8, 39–54. doi: 10.1016/j.ejeps.2015.10.005
- Jones, A. M., and Suveg, C. (2015). Flying under the radar: school reluctance in anxious youth. *Sch. Ment. Heal.* 7, 212–223. doi: 10.1007/s12310-015-9148-x
- Kearney, C. A. (2002). Identifying the function of school refusal behavior: a revision of the school refusal assessment scale. *J. Psychopathol. Behav. Assess.* 24, 235–245. doi: 10.1023/A:1020774932043
- Kearney, C. A. (2006). Confirmatory factor analysis of the school refusal assessment scale—revised: child and parent versions. *J. Psychopathol. Behav. Assess.* 28, 139–144. doi: 10.1007/s10862-005-9005-6
- Kearney, C. A. (2016). *Managing school absenteeism at multiple tiers: An evidence-based and practical guide for professionals*. New York, NY: Oxford University Press.
- Kearney, C. A., and Albano, A. (2004). The functional profiles of school refusal behavior: diagnostic aspects. *Behav. Modif.* 28, 147–161. doi: 10.1177/0145445503259263
- Maynard, B. R., Salas-Wright, C. P., Vaughn, M. G., and Peters, K. E. (2012). Who are truant youth? Examining distinctive profiles of truant youth using latent profile analysis. *J. Youth Adolesc.* 41, 1671–1684. doi: 10.1007/s10964-012-9788-1
- McQuade, J. D., Murray-Close, D., Shoulberg, E. K., and Hoza, B. (2013). Working memory and social functioning in children. *J. Exp. Child Psychol.* 115, 422–435. doi: 10.1016/j.jecp.2013.03.002
- Méndez, F. X., Llavona, L. M., Espada, J. P., and Orgilés, M. (2012). *Programa FORTIUS. Fortaleza psicológica y prevención de las dificultades emocionales [FORTIUS program. Psychological strength and prevention of emotional difficulties]*. Madrid, Spain: Pirámide.
- Miller, A. L., Gouley, K., Seifer, R., Zakriski, A., Eguia, M., and Vergnani, M. (2005). Emotion knowledge skills in low-income elementary school children: associations with social status and peer experiences. *Soc. Dev.* 14, 637–651. doi: 10.1111/j.1467-9507.2005.00321.x
- Price, C. S., Spence, S. H., Sheffield, J., and Donovan, C. (2002). The development and psychometric properties of a measure of social and adaptive functioning for children and adolescents. *J. Clin. Child Adolesc. Psychol.* 31, 111–122. doi: 10.1207/S15374424JCCP3101_13
- Prieto, G., and Delgado, A. R. (2010). Fiabilidad y validez [Reliability and validity]. *Papeles Psicol.* 31, 67–74.
- Raine, A., Dodge, K. A., Loeber, R., Gatzke-Kopp, L., Lynam, D., Reynolds, C., et al. (2006). The reactive-proactive aggression questionnaire: differential correlates of reactive and proactive aggression in adolescent boys. *Aggress. Behav.* 32, 159–171. doi: 10.1002/ab.20115
- Rapp, D. J., Engemann, J. M., Herrmann, E., and Tomasello, M. (2017). The impact of choice on young children's prosocial motivation. *J. Exp. Child Psychol.* 158, 112–121. doi: 10.1016/j.jecp.2017.01.004
- Renouf, A. G., Kovacs, M., and Mukerji, P. (1997). Relationship of depressive, conduct, and comorbid disorders and social functioning in childhood. *J. Am. Acad. Child Adolesc. Psychiatry* 36, 998–1004. doi: 10.1097/00004583-199707000-00023
- Richards, H. J., and Hadwin, J. A. (2011). An exploration of the relationship between trait anxiety and school attendance in young people. *Sch. Ment. Heal.* 3, 236–244. doi: 10.1007/s12310-011-9054-9
- Shillock, G. G. (2010). *Investigating the factors associated with emotionally-based non-attendance at school from young people's perspective*. Birmingham: The University of Birmingham.
- Spence, S. H., Price, C., Sheffield, J., and Donovan, C. (2000). *The child and adolescent social and adaptive functioning scale (CASAFA)*. Brisbane, Australia: University of Queensland.
- Talwar, V., Lavoie, J., Gomez-Garibello, C., and Crossman, A. M. (2017). Influence of social factors on the relation between lie-telling and children's cognitive abilities. *J. Exp. Child Psychol.* 159, 185–198. doi: 10.1016/j.jecp.2017.02.009
- Thornton, M., Darmody, M., and McCoy, S. (2013). Persistent absenteeism among Irish primary school pupils. *Educ. Rev.* 65, 488–501. doi: 10.1080/00131911.2013.768599
- Vicent, M., Inglés, C. J., Sanmartín, R., and García-Fernández, J. M. (2016). Perfeccionismo socialmente prescrito y los cinco grandes rasgos de la personalidad en niños españoles [Socially prescribed perfectionism and the big five personality traits in Spanish children]. *EJIHPE* 6, 107–118. doi: 10.30552/ejihpe.v6i2.162
- Vicent, M., Inglés, C. J., Sanmartín, R., González, C., Granados, L., and García-Fernández, J. M. (2017). Perfeccionismo socialmente prescrito y afectividad en población infantil española [Socially prescribed perfectionism and affect in Spanish children population]. *EJIHPE* 7, 17–29. doi: 10.1989/ejihpe.v7i1.192
- Vuthiarp, S., Sethabouppha, H., Soivong, P., and Williams, R. (2012). Effectiveness of a school-based cognitive behavioral therapy program for Thai adolescents with depressive symptoms. *Pac. Rim. Int. J. Nurs. Res. Thai.* 16, 206–221.
- Wilson, V., Malcolm, H., Edward, S., and Davidson, J. (2008). “Bunking off”: the impact of truancy on pupils and teachers. *Br. Educ. Res. J.* 34, 1–17. doi: 10.1080/01411920701492191
- Yahaya, A., Ramli, J., Hashim, S., Ibrahim, M. A., Kadir, H. B. H., Boon, Y., et al. (2010). The effects of various modes of absenteeism problem in school on the academic performance of students in secondary schools. *Eur. J. Soc. Sci.* 12, 624–639.

Conflict of Interest Statement: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

The reviewer NM declared a past collaboration with several of the authors CG, CI, RS, MV, JG-F to the handling Editor.

Copyright © 2019 González, Inglés, Martínez-Palau, Sanmartín, Vicent and García-Fernández. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



Latent Class Analysis of School Refusal Behavior and Its Relationship With Cyberbullying During Adolescence

B. Delgado¹, M. C. Martinez-Monteaudo^{1*}, C. Ruiz-Esteban² and E. Rubio¹

¹Department of Developmental Psychology and Didactic, Faculty of Education, University of Alicante, Alicante, Spain,

²Department of Developmental Psychology and Education, Faculty of Psychology, University of Murcia, Murcia, Spain

OPEN ACCESS

Edited by:

Christopher Kearney,
University of Nevada, Las Vegas,
United States

Reviewed by:

Raúl Navarro,
University of Castilla La Mancha,
Spain
Jie Zhang,
The College at Brockport,
United States

*Correspondence:

M. C. Martinez-Monteaudo
maricarmen.martinez@ua.es

Specialty section:

This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Psychology

Received: 21 June 2019

Accepted: 05 August 2019

Published: 16 August 2019

Citation:

Delgado B, Martinez-Monteaudo MC,
Ruiz-Esteban C and Rubio E (2019)
Latent Class Analysis of School
Refusal Behavior and Its
Relationship With Cyberbullying
During Adolescence.
Front. Psychol. 10:1916.
doi: 10.3389/fpsyg.2019.01916

Cyberbullying is a common relational problem having negative repercussions on the academic performance of adolescents. Numerous questions remain to be answered with regard to the relationship between cyberbullying and school refusal behavior. This study examines school refusal profiles (measured by School Refusal Assessment Scale-Revised) and assesses whether these profiles vary with respect to the level of victimization, aggression, aggression-victimization, and observation of cyberbullying (measured with the Screening of Harassment among Peers). The sample consisted of 1,102 Spanish high school students, aged 12–18 ($M = 14.30$, $SD = 1.71$). Latent class analysis revealed three school refusal behavior profiles: non-school refusal behavior, school refusal behavior by negative reinforcements (oriented to the avoidance of social evaluation and negative affectivity in school situations), and school refusal behavior by positive reinforcements (oriented to obtaining the attention of others with significant or tangible reinforcements). The ANOVA found statistically significant differences for all cyberbullying behaviors. Students with school refusal by negative reinforcements had significantly higher mean scores as compared to the other profiles in victimization, aggression, aggression-victimization, and observation behaviors, while the levels of cyberbullying were similar between students without school refusal and students with school refusal behavior by positive reinforcements. These findings underscore the need to consider priority interventions to prevent cyberbullying in children who refuse school for the purpose of avoiding situations of anxiety and negative emotions.

Keywords: school refusal behavior, cyberbullying, cybervictimization, latent class analysis, adolescence

INTRODUCTION

School refusal behavior (SRB) is defined as the difficulty in attending or remaining in school for the entire day (Hendron and Kearney, 2011). This phenomenon has multiple causes and affects approximately 30% of all minors aged 7–17 (Mihalas, 2014; Organization for Economic Cooperation and Development, 2016). SRB includes all types of school absenteeism in which

symptoms of anxiety may or may not exist, such as school rejection or truancy (Kearney and Albano, 2018). It is considered to be a significant educational and health problem, given its numerous negative consequences. Evidence from prior studies suggests that SRB is related to: (a) internalizing problems, such as comorbidity with anxiety problems due to separation, generalized anxiety, social anxiety, and oppositional defiant disorder; (b) externalizing problems, such as aggressive behavior, consumption of drugs and alcohol; and (c) health problems such as asthma, migraines, obesity, etc. (Kearney, 2008; González et al., 2018; for a review). In addition, chronic absenteeism may impair academic performance, being the most likely cause of early school drop-out, and placing minors at risk of developing problems such as drug consumption, delinquent behavior, social adjustment issues, and mental health problems (Dembo et al., 2013), thus leading to a decreased chance of attaining qualified and stable employment during adulthood (Wilson et al., 2008).

Therefore, it is important to understand the causes that may lead students to reject and not attend school as well as to determine the different profiles in these youth who do not attend school, in order to improve the prevention or intervention strategies employed in the scholastic context. Of the most relevant contemporary theoretical approaches, we find the functional model proposed by Kearney and Silverman (1993) which establishes a classification of SRB based on the school rejection motivation, including a large percentage of youth having school attendance issues. This model distinguishes between four functional conditions that underlie SRB: (1) avoidance of school-based stimuli that provoke negative affectivity (e.g., distress, anxiety, depression); (2) escape from aversive social and/or evaluative situations (e.g., tests, peer interactions); (3) pursuit of attention from significant others (e.g., parents); and/or (4) pursuit of tangible reinforcers outside of school (e.g., sleeping, watching television, playing video games). These conditions are grouped together, taking into account the behavioral consequences of the minors' responses. So, the first two conditions refer to school refusal behavior based on negative reinforcement or the avoidance of aversive situations, whereas the latter two conditions refer to school refusal behavior that is based on positive reinforcement or obtaining something positive outside the school (Kearney, 2002). This functional classification system has considerable advantages, such as a greater ability to distinguish between the different causes of SRB with and without anxious symptomatology (González et al., 2018; Sanmartín et al., 2018), and therefore, an increased specification and efficiency in the implementation of intervention strategies for each student.

Based on the functional classification system, prior studies have attempted to analyze the SRB profiles in children and adolescents (Dube and Orpinas, 2009; González et al., 2018). For instance, Dube and Orpinas (2009) in a clinical sample of 99 US students aged 8–15 with school attendance problems detected three profiles: a profile of multiple SRB having negative and positive reinforcement factors (17.2%), another SRB profile to obtain tangible positive reinforcement or parent's attention (60.6%), and another non-SRB (22.2%). In addition, students

with multiple SRB had significantly more behavioral problems (emotional problems, behavior problems, hyperactivity, and social problems with peers), and a higher frequency of victimization, aggression, and traumatic or stressful events. González et al. (2018), in an analysis of conglomerates based on a community sample of 1,582 Colombian students aged 12–18, found three distinct profiles: a group that did not reject school (44.8%), another that rejected school to obtain tangible reinforcers (42.9%), and a third group that rejected school for distinct motives such as to avoid situations causing negative emotions or social assessment and to attract the attention of significant others, such as their parents (12.2%). They also found that the group having the worst psycho-social adjustment with higher levels of anxiety, depression, and stress was the group that rejected going to school due to distinct causes (González et al., 2018).

In addition to low psycho-emotional and academic adjustment, SRB has also been strongly associated with variables of social interaction. So, many authors have suggested that poor relationships with schoolmates and bullying are significant factors in determining school rejection and absenteeism (Dube and Orpinas, 2009; Barboza, 2015; Havik et al., 2015). Barboza (2015) found that being victimized was related with an increased risk of developing escape and avoidance responses in the school environment, as well as skipping class and staying home during school hours. Havik et al. (2015), using a structural equations model found that being a victim of bullying was related to school rejection. They also found that social isolation and a lack of friends had more negative repercussions on minors who reject school since they caused negative emotions, whereas those of absenteeism/truancy had a lower impact since the students could be popular in school while maintaining social friendship networks outside of the school setting.

However, the phenomenon of victimization and bullying between peers is not unique to the school setting. With the widespread and generalized use of the information and communication technologies and the social networks, minors today are immersed in an environment in which they are more likely to suffer from or perpetrate these acts of bullying, better known as “cyberbullying” or “electronic bullying.” Cyberbullying has been defined as an aggressive action carried out repeatedly and deliberately through electronic means, toward an individual who cannot easily defend him/herself (Smith and Steffgen, 2013). The main roles involved in cyberbullying are: the victims, or those who suffer victimization; the aggressors, or people who perpetrate the harassment; and the observers, or individuals who witness the cyberbullying behaviors but do not directly take part in them. Another role has also been identified which includes people who, being victims, develop online bullying behaviors, and it is called the bully-victims (Schultze-Krumbholz et al., 2018). The prevalence of cyberbullying varies depending on the study (10–40%) and its negative consequences on psychological and social adjustment of the minors are multiple (Kowalski et al., 2014; Morin et al., 2018; for a review).

On account of cyberbullying research, it is important to mention that there is a lack in its theoretical foundation.

In this sense, it is common to apply the general aggression model and the socio-ecological model to explain the potential influence of contextual and personal factors as risk elements for the development of harassment situations and aggression (Morin et al., 2018). Thus, among the personal variables, emotional problems and the perception of threat and insecurity in the educational context have been identified as risk variables for refusing school and being absent, while among the contextual factors, the disorganization of schools in matters of respect and violence control have been associated with greater absenteeism (Kearney, 2008). Thus, as occurs with face-to-face bullying, cyberbullied students tend to have a greater likelihood of being absentees (Barboza, 2015; Steiner and Rasberry, 2015; Grinshteyn and Yang, 2017). Barboza (2015), in a sample of 5,589 US adolescents, found that cyberbullying was related to escape behaviors in the school context, unjustified absences, and staying at home during school hours. Grinshteyn and Yang (2017), with a sample of 13,554 US students aged 14–18, found that the cyberbullied students were at a greater risk of being absentees as compared to those adolescents who were not victims of said cyberbullying. In addition, students who had experienced situations with violence, who had been threatened, or who felt sad or useless during the past year, also had higher probabilities of not attending school. Steiner and Rasberry (2015), analyzing 13,583 high school students, in grades 9–12, found that, with regard to the relationship between absenteeism and victimization (in person and electronic), minors who were victims of traditional bullying and cyberbullying were more likely to be absent from school since they considered it to be an unsafe place. Specifically, female victims of cyberbullying were 2.10 times more likely to not attend class, whereas this increased to a risk of 5.34 times, when they were victimized both *via* internet and in person. Male victims of cyberbullying were 3.58 times more likely to be absentee students, with this risk increasing to 6.68 if they were victimized both in the traditional manner and *via* electronic means (Steiner and Rasberry, 2015).

On the other hand, some studies have related the level of absenteeism and school rejection with being an aggressor or perpetrator of cyberbullying (Wright, 2015; Morin et al., 2018). A longitudinal study extending over 1 year found that in 673 US eighth graders, perpetration and victimization *via* cyberbullying were both related to increased absenteeism and poorer academic performance after controlling for the prior level of absenteeism, and in-person bullying between peers (Wright, 2015). In addition, Morin et al. (2018), in a sample of 28,583 US high school students (grades 9–12), found that being a victim or aggressor of cyberbullying was associated with an increased risk of psychological issues such as internalizing problems, sleep disorders, and stress problems, as well as academic adjustment problems such as absenteeism (truancy) and poor academic performance. Specifically, the perpetrators of cyberbullying were 123.1% more likely to miss classes twice or more times per month (Morin et al., 2018).

Although it is relevant that silencing the aggression contributes to the perpetuation of harassment over time, no

study to date has examined the relationship between SRB and cyberbullying observers. Cyberbullying observers or bystanders are a heterogeneous group composed by individuals who witness cyberbullying behaviors but do not involve in them directly (Schultze-Krumbholz et al., 2018). Bystanders can manifest negative consequences in their psycho-emotional adjustment (Garaigordobil, 2011; Wright, 2019), these include inferiority feelings, impotence, sadness, rage, guilt, and fear. If these emotional consequences are related with the educational context, this fact can lead them to refuse the school because it is perceived as an insecure environment (Grinshteyn and Yang, 2017).

This evidence suggests the importance of considering the negative consequences of cyberbullying on the academic adjustment of adolescents based on its direct implication on SRB. However, these studies have not considered the causes of the absenteeism and the functional analysis of SRB in terms of its relationship with cyberbullying. Furthermore, prior studies have considered the role of the victim and have, at times, considered the aggressor role (Wright, 2015; Morin et al., 2018) in explaining absenteeism, but they have not looked at other potentially important roles in cyberbullying such as that of the aggressor-victim or the cyberbullying observer. It is necessary to determine the causes leading a minor to stop attending school and whether or not the distinct profiles of students who reject school may be related differently to the main roles of cyberbullying. This analysis provides keys that may help to establish better preventive measures and intervention strategies for the distinct groups of absentee students and those involved in the cases of cyberbullying. Furthermore, this study uses a classification process that is based on a latent variable mixture which surpasses the traditional statistical techniques (Schreiber, 2017).

The first objective of this study is to use latent class analysis to analyze the SRB profiles while considering the potential motives behind student rejection of school, based on a functional classification system. Taking prior studies into account (Dube and Orpinas, 2009; González et al., 2018), three SRB profiles are anticipated (one with low school rejection, another with rejection by positive reinforcement, and another with multiple causes for rejection). The second objective consists of examining the differences in cyberbullying (victimization, aggression, observation, and aggression-victimization) through the distinct SRB profiles that were previously determined. Taking into account these results, it is expected that adolescents with a high SRB profile will have higher scores on the cyberbullying roles than those with a low SRB profile.

MATERIALS AND METHODS

Ethics Statement

All of the standards for research conducted with humans were respected according to the ethical principles of the Declaration of Helsinki (World Medical Association, 2013) and were guaranteed by the Ethics Committee of the Universidad de Alicante (Reference number: UA-2018-02-21).

Participants

Participants were students from secondary-level education of the Valencian Community (Spain) during the 2017–2018 academic years. The Valencian Community approximately served a total of 261,000 secondary education students (Ministry of Education and Vocational Training, 2018). Two-stage random sampling was conducted. In the first stage, eight public and two charter secondary schools were randomly selected in Alicante province. Once the schools were selected, in the second stage of sampling, four classes were randomly selected from each school. Due to the random sampling method, the socioeconomic status and ethnic composition of the overall sample are assumed to be representative of the community. The study sample included 1,148 students, of which 46 (3.8%) were eliminated due to errors or omissions in their responses or because they did not obtain parental consent to participate in the study. The final sample consisted of 1,102 high school students, aged 12–18 ($M = 14.30$; $SD = 1.71$), with 509 males (46.2%) and 593 females (53.8%) participating. The sample's distribution based on academic year was as follows: 184 (7th grade), 193 (8th grade), 190 (9th grade), 182 (10th grade), 208 (11th grade), and 145 (12th grade). The χ^2 test was used to analyze the homogeneity of the sample in terms of gender and course, with no statistically significant differences being found between the groups of Gender x Course ($\chi^2 = 2.97$, $p = 0.704$).

Measures

School Refusal Assessment Scale-Revised

The School Refusal Assessment Scale-Revised (SRAS-R) is one of the most widely-used questionnaires for the measurement of SRB considering functional conditions (Kearney, 2002; adaptation of González et al., 2016). The questionnaire consists of 24 items that are responded to using a 7-point Likert scale (0: *never*; 6: *always*) and that assess the relative self-perception of the four fundamental factors of SRB: *avoidance of school situations that provoke negative affectivity* (ANE; e.g., “How many times have you tried to avoid going to school because if you went you would feel sad or depressed?”), *escape from aversive social or evaluative situations* (ESE; e.g., “How many times have you tried to avoid going to school because it would be hard to talk to other boys/girls in the school?”), *pursuit of attention from significant others* (PA; e.g., “How many times would you have preferred to be with your family instead of going to school?”), and *pursuit of tangible reinforcement* (PTR; e.g., “How many times have you not gone to school because you wanted to have fun outside of school?”). The scale can be used for students from 8 to 17 years of age. SRAS-R scores have been found to have suitable psychometric properties in adolescents from distinct cultures (Richards and Hadwin, 2011; Seçer, 2014; Walter et al., 2017) and factorial invariance based on sex and age in Spanish school-aged populations (González et al., 2016) and in Chilean adolescent populations (González et al., 2018). In this study, the subscales of the questionnaire demonstrated an adequate reliability based on the Cronbach's alpha values which were 0.77 for ANE, 0.75 for ESE, 0.80 for PA, and 0.78 for PTR.

Screening of Harassment Among Peers

The Screening of Harassment Among Peers (SPH) is a self-reporting instrument that assesses bullying and cyberbullying behavior in adolescents and youth taking place over the past year, *via* four subscales: *victimization* (behavior suffered by the bullying victim), *aggression* (bullying behavior perpetrated by the aggressor), *observation* (bullying behavior witnessed by the observer), and *aggression-victimization* (bullying behaviors that are suffered as a victim and perpetrated as an aggressor) (Garaigordobil, 2013). The questionnaire assessed 15 cyberbullying behaviors such as password and identity theft, anonymous calling to frighten, slander/spread rumors to discredit, send offensive/insulting messages, the dissemination of recorded aggressions or private videos over the Internet, the sexual bullying of others over the Internet, threats made so that secrets are not revealed over the network, and death threats made over the Internet. The cyberbullying questionnaire contains a total of 45 items and a Likert-like response format with four options (1: *Never*; 4: *Always*). The reliability of the instrument has been confirmed by the original authors in samples of Spanish adolescents (Garaigordobil, 2013, 2015). In this study, the internal consistency coefficients (Cronbach's alpha) were satisfactory for the total score of the questionnaire (0.98) and for the subscales of victimization (0.95), aggression (0.96), observation (0.94), and aggression-victimization (0.98).

Procedure

Initially, the researchers interviewed the management team of the selected schools in order to explain the purpose of the study. Then, an informative letter was sent to the parents of the minors in order to explain the study and to request their informed consent in writing. Questionnaires were responded to collectively and voluntarily in the classrooms during a class session, ensuring the anonymity of the participants and the confidentiality of the data. To do so, identification numbers were assigned on the response sheets of each participant. The researchers were present during the administration of the tests to clarify any potential doubts and to verify the correct completion of the questionnaires, which had a mean completion time of 15 min.

Statistical Analyses

The SRB profiles were defined based on the combinational differences of the four functional conditions of the SARS-R, and were established using the latent class analysis (LCA). LCA is considered to be the most appropriate procedure for establishing profiles in large samples and it surpasses the limitations found in other statistical techniques such as the analysis of conglomerates (Schreiber, 2017). Considering the number of classes proposed by the researchers, subjects were included in one of the classes according to their profile. To select the number of classes that best represented the research data, the lowest indicator of the Bayesian Information Criteria (BIC) and the Akaike Information Criterion (AIC) were used as adjustment indices, as well as the value closes

to one for the Entropy (Schreiber, 2017; Smeets et al., 2017). Finally, to calculate the differences for cyberbullying (victimization, aggression, observation, and aggression-victimization) between the distinct classes of SRB, ANOVAs were conducted as well as *post hoc* Scheffé tests to determine the groups between which there were statistically significant differences. Finally, the *d* index (standardized mean difference) proposed by Cohen (1988) was calculated, allowing for the assessment of the magnitude or effect size of the differences that were found. Its interpretation is simple: $0.20 \leq d \leq 0.50$ means a small effect size, while $0.51 \leq d \leq 0.79$ is moderate, and $d \geq 0.80$ is large.

RESULTS

School Refusal Behavior Profiles

The LCA found that the class made up of three profiles with different levels of SRB, considering the four dimensions of the SRAS-R, ANE, ESE, PA, and PTR (see Figure 1), had the best adjustment for the BIC, AIC, and Entropy indicators (see Table 1). The first profile, SRB by negative reinforcements, included 419 students (38.02%) with high levels of ANE and of ESE and low levels of PA and PTR. The second profile, SRB by positive reinforcements, classified at 389 (35.29%) with high levels of PA and PTR and low levels of ANE and ESE. The third profile, non-SRB included 267 (24.22%) students having low scores on the four analyzed dimensions.

Inter-group Differences in Cyberbullying Behavior

The ANOVA found statistically significant differences between the SRB profiles for all of the cyberbullying roles. The results obtained from the *post hoc* tests indicate that the students with a SRB by negative reinforcements profile received significantly higher scores on victimization, aggression, aggression-victimization, and observation of cyberbullying than the non-SRB group and the group of students with SRB by positive reinforcement (see Table 2). However, these differences were not found between the profiles of SRB by positive reinforcements and the non-SRB students.

As shown in Table 3, the effect sizes (mean standardized difference) for the differences found in cyberbullying were small in size for the groups of SRB by positive reinforcements and SRB by negative reinforcements ($d < 0.46$), whereas the

TABLE 1 | Fit indices of the latent class analysis (LCA) values in bold revealing the best model fit.

No. of classes	BIC	AIC	Entropy	Number of parameters
2	11141.88	11057.22	0.767	17
3	10127.93	9863.988	0.800	26
4	10307.81	10088.68	0.750	35
5	10493.83	10319.53	0.767	44
6	10760.03	10630.54	0.742	53

BIC, Bayesian Information Criterion; AIC, Akaike Information Criterion.

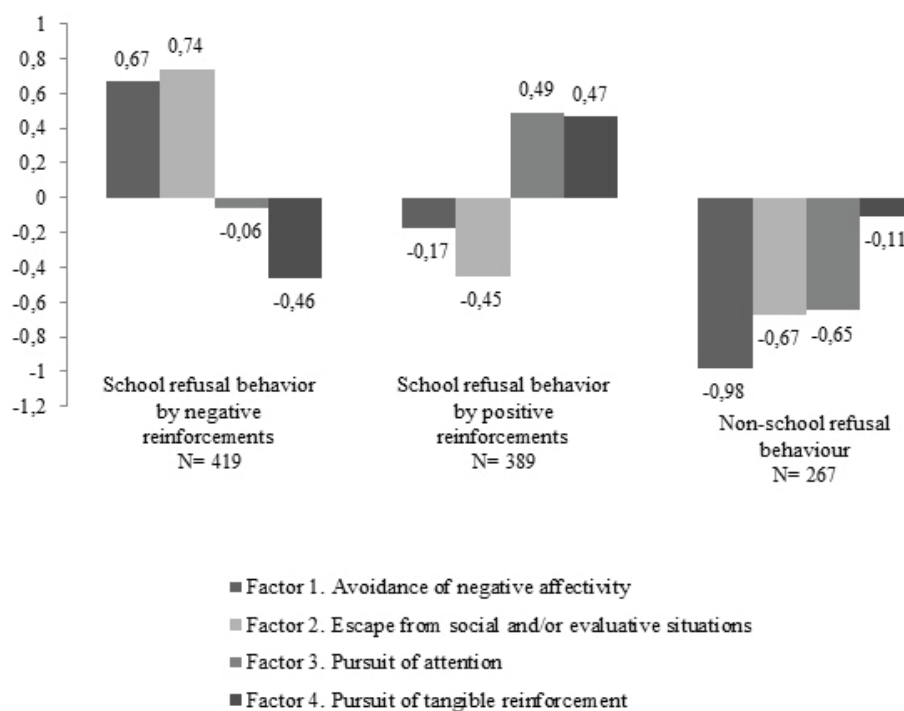


FIGURE 1 | Graphic representation of the LCA solution. Note: SRB, School Refusal Behavior.

TABLE 2 | Means and standard deviations of cyberbullying between classes and statistical significance.

	Negative reinforcement SRB		Positive reinforcement SRB		Non-SRB		<i>F</i>	<i>p</i>	η^2
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Victimization	26.06	10.78	21.51	9.12	20.07	8.64	37.543	0.00	0.065
Aggression	25.20	10.97	20.61	9.48	19.23	8.65	36.088	0.00	0.063
Aggression-victimization	51.25	21.40	42.12	18.30	39.30	17.01	38.039	0.00	0.066
Observation	26.70	10.06	23.23	9.51	21.88	9.47	23.419	0.00	0.042

SRB, school refusal behavior.

TABLE 3 | Cohen's *d* index to *post hoc* contrast between the means scores and the three classes in the roles of cyberbullying.

	Negative reinforcement SRB vs. positive reinforcement SRB	Negative reinforcement SRB vs. non-SRB	Positive reinforcement SRB vs. non-SRB
Victimization	0.45	0.60	n.s.
Aggression	0.44	0.59	n.s.
Aggression-victimization	0.46	0.60	n.s.
Observation	0.35	0.49	n.s.

SRB, school refusal behavior; n.s., non-significant differences.

differences between the group of SRB by negative reinforcement and the non-SRB were moderated by the differences in victimization, aggression, and aggression-victimization, and were small for the difference in observation of cyberbullying.

DISCUSSION

This study had two objectives: first, the analysis, *via* latent class analysis, of the SRB profiles, taking into account the motives leading students to reject school, according to the four-factor functional model (Kearney and Silverman, 1993), and second, to examine the differences in cyberbullying (victimization, aggression, observation, and aggression-victimization) through the different SRB profiles in a sample of Spanish high school students.

In line with the results obtained from prior studies (Dube and Orpinas, 2009; González et al., 2018), three SRB profiles were anticipated: one with low school rejection, another with rejection by positive reinforcement, and another with multiple causes for the rejection. The results of the study suggest the existence of three SRB profiles but they differ slightly from the expected results. A class of students was found that rejected school in order to avoid negative emotions and stressful social and assessment situations (38%; SRB by negative reinforcements). This profile did not coincide with that found in prior studies, since the negative reinforcement factors of school rejection (avoiding or escaping negative situations and emotions) were not grouped together with positive reinforcement factors (obtaining parents' attention) in a group or profile of multiple school rejection (Dube and Orpinas, 2009; González et al., 2018). Also, in this work, the incidence of students rejecting school

due to an emotional or anxiety-based component is higher than the group that rejected school due to a variety of causes (12.2–17.2%). These findings, while dissenting, reinforce the contributions of Kearney (2002) and Kearney and Albano (2004) which combined the dimensions of ANE and ESE since they were considered to be similar.

On the other hand, a second class was identified which was characterized by students who rejected going to school in an attempt to obtain their parents' attention and other tangible reinforcers outside of the school (35.3%; SRB by positive reinforcements). This class coincides with the findings of Dube and Orpinas (2009) and coincides partially with those of González et al. (2018) in the conglomerate of rejection by tangible reinforcements; however, it differed in the quantity of students grouped in this class, since the prevalence is lower than in prior studies (42.9–60.6%). This may be due to differences in age and community characteristics of the sample examined in this study. Finally, the prevalence of students who did not reject school (24.22%; non-SRB) was similar to that found for students with school attendance problems (Dube and Orpinas, 2009) (22.2%) and lower than that found in the Colombian adolescents (González et al., 2018) (44.8%). Therefore, the initial study hypothesis can only be partially confirmed.

Given the results for the three latent classes, the cyberbullying behavior was analyzed, finding inter-class differences in the scores for victimization, aggression, observation, and aggression-victimization. The profile of students with SRB by negative reinforcements had significantly higher scores than the other profiles for all cyberbullying behaviors. These results confirm the second hypothesis which anticipates that the adolescents with a high SRB profile would have higher scores in cyberbullying and reinforces the findings of prior studies that found cyber-victimized adolescents to be a population at risk of not attending school because they did not feel safe (Steiner and Rasberry, 2015; Grinshteyn and Yang, 2017) and in order to engage in escape and avoidance behavior in an educational context (Barboza, 2015). Furthermore, the results are in line with those from other studies with adolescents that have related the level of absenteeism and school rejection with being an aggressor or perpetrator of cyberbullying (Wright, 2015; Morin et al., 2018), and high aggression levels with higher levels of school rejection in order to avoid negative affectivity and social evaluation and to gain the attention of significant others and similar levels of school rejection to obtain tangible reinforcers (Vicent et al., 2018).

However, students with SRB by positive reinforcements are not different from the non-SRB group in terms of the four

cyberbullying roles. This may be explained by the different impact of cyberbullying according to the school rejection declarations. Havik et al. (2015) found that victimization, social isolation, and a lack of friends may have more negative repercussions on minors who reject school since they lead to negative emotions, whereas for those having a non-anxious/truancy rejection profile (e.g., to obtain tangible reinforcements), the impact is less intense, since they may be popular in the school in addition to maintaining social friendship networks outside of the school setting. So, the authors conclude that anti-bullying actions should be mainly directed toward those students who reject school in order to prevent negative emotions, as opposed to absentee students who seek to obtain tangible reinforcement by skipping class (Havik et al., 2015). Furthermore, students with SRB by positive reinforcements are found to have greater emotional adjustment, which may result in an improved ability to handle cyberbullying situations. Thus, González et al. (2016) found that school rejection that was intended to decrease negative emotions and social situations was more closely related to negative and pessimistic emotions, whereas this relationship was not found in those students who skipped school in order to obtain tangible reinforcement, who were shown to have higher levels of positive emotions and optimism and lower levels of pessimism.

The results of this work expand upon the results of prior studies, analyzing other important roles in cyberbullying such as that of the aggressor-victimized and the cyberbullying observer. This study found that students with SRB derived from a high negative emotionality and avoidance of evaluation and social situations had higher scores on aggression-victimization and on the observation of cyberbullying behaviors. Like in other studies (e.g., Schultze-Krumbholz et al., 2018) in which bully-victims are identified as less socially competent, with high levels of aggression and low levels of empathy, the results of this study underline that SRB by emotional or social problems may manifest more aggression-victimization behaviors than truancy adolescents or those who do not reject school. In addition, students who reject school by emotional and social problems have less social skills and can use technologies as a measure of socialization with their peers, which can lead them to observe or suffer more cases of cyberbullying (Marques et al., 2018). Moreover, it is common that cyber aggressors are classmates or schoolmates (Karna et al., 2010; Festl et al., 2013); so, students with more emotional and social difficulties would avoid going to school in order to not to meet face-to-face with their aggressors and trying to reduce the fear or anxiety they feel. Therefore, it was assumed that the group of students with SRB by negative reinforcements is related with committing and suffering cyberbullying actions and of observing them, as with the traditionally analyzed cyberbullying roles (victim and perpetrator). These findings once again highlight the need to consider that the cyberbullying experiences in adolescents may lead to unjustified school absences due to the associated increase in fear, discomfort, and anxiety (Steiner and Rasberry, 2015; Grinshteyn and Yang, 2017), and that this situation, if extending over time, may have a negative impact on school adjustment, leading to poor academic performance, as is the case with in-person bullying between peers (Barboza, 2015; Morin et al., 2018).

Limitations and Practical Implications

This study has certain limitations, including the impossibility of generalizing the results to other education levels and to other countries. Future studies should analyze whether or not the findings differ in other academic levels and in other cultures. Furthermore, the cross-sectional design used in the study makes it impossible to establish causal relationships. Therefore, it is recommended that longitudinal studies be carried out to provide additional information on the evolution of the SRB phenomenon and cyberbullying over the years. In addition, regarding Schultze-Krumbholz et al. (2018), cyberbullying observers or bystanders can be involved in an active way (either encouraging the bully to continue with the abuse or helping the victim to get out of the situation) or a passive way (looking the other way and allowing the harassment). These two differentiated characteristics of behavior should be evaluated in future research to assess their relation with the SRB. Finally, it should be noted that the assessment of the constructs has only been carried out using self-reports; therefore, it may be useful for future studies to consider multi-source (e.g., parents, teachers, counselors) and multi-methods assessments (e.g., interviews, questionnaires, observation, self-recording). Despite these limitations, this study provides some novel and important information for the study and understanding of SRB and their relationship with cyberbullying during adolescence, since it focuses on the functional characteristics of SRB and its relationship with all of the roles of cyberbullying, thus permitting the creation of defined profiles that facilitate the understanding of the phenomenon and an improved efficacy of the preventive strategies.

To conclude, this study has found the existence of three profiles of adolescents who reject school, with the most prevalent profile (38.02%) having a negative emotional component whose motives for rejecting school include avoiding negative emotions and social and assessment situations in the school (SRB by negative reinforcements). These students also correspond with the profile of having a higher level of cyberbullying behavior, both as victims and aggressors, aggressor-victim, and observer. Thus, strategies to prevent cyberbullying in academic settings should focus on the identification and intervention of cases, taking SRB into account, especially in adolescents who reject school to avoid situations of anxiety and/or negative emotions.

DATA AVAILABILITY

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the University of Alicante. Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

AUTHOR CONTRIBUTIONS

BD conceived the study and participated in its design, coordination, statistical analysis, and the manuscript drafting. MM-M participated in the study design and data interpretation,

while also assisting in the drafting of the manuscript. CR-E performed a critical review of the manuscript and assisted with interpretation of the findings. ER assisted with the study conception. All authors read and approved the final manuscript.

REFERENCES

- Barboza, G. E. (2015). The association between school exclusion, delinquency and subtypes of cyber- and F2F-victimizations: identifying and predicting risk profiles and subtypes using latent class analysis. *Child Abuse Negl.* 39, 109–122. doi: 10.1016/j.chiabu.2014.08.007
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. 2nd Edn. Hillsdale, NJ: Erlbaum.
- Dembo, R., Briones-Robins, R., Barrett, K., Winters, K. C., Schmeidler, J., Ungaro, R. A., et al. (2013). Mental health, substance use, and delinquency among truant youth in a brief intervention project: a longitudinal study. *J. Emot. Behav. Disord.* 21, 176–192. doi: 10.1177/1063426611421006
- Dube, S. R., and Orpinas, P. (2009). Understanding excessive school absenteeism as school refusal behavior. *Child. Sch.* 31, 87–95. doi: 10.1093/cs/31.2.87
- Festl, R., Scharrow, M., and Quandt, T. (2013). Peer influence, internet use and cyberbullying: a comparison of different context effects among German adolescents. *J. Child. Media* 7, 446–462. doi: 10.1080/17482798.2013.781514
- Garaigordobil, M. (2011). Prevalencia y consecuencias del cyberbullying: una revisión [Prevalence and consequences of cyberbullying: a review]. *Int. J. Psychol. Psychol. Therapy* 11, 233–254.
- Garaigordobil, M. (2013). *Cyberbullying. Screening of peer harassment*. Madrid: TEA.
- Garaigordobil, M. (2015). Cyberbullying in adolescents and youth in the Basque Country: changes with age. *Ann. Psychol.* 31, 1069–1076. doi: 10.6018/analesps.31.3.179151
- González, C. (2018). *¡No quiero ir al colegio! El niño que rechaza la escuela [I do not want to go to school! The child who refuse school]*. Madrid: Pirámide.
- González, C., Inglés, C. J., Kearney, C. A., Vicent, M., Sanmartín, R., and García-Fernández, J. M. (2016). School refusal assessment scale-revised: factorial invariance and latent means differences across gender and age in Spanish children. *Front. Psychol.* 7, 1–10. doi: 10.3389/fpsyg.2016.02011
- González, C., Kearney, C. A., Jiménez-Ayala, C. E., Sanmartín, R., Vicent, M., Inglés, C. J., et al. (2018). Functional profiles of school refusal behavior and their relationship with depression, anxiety, and stress. *Psychiatry Res.* 269, 140–144. doi: 10.1016/j.psychres.2018.08.069
- Grinshteyn, E., and Yang, Y. T. (2017). The association between electronic bullying and school absenteeism among high school students in the United States. *J. Sch. Health* 87, 142–149. doi: 10.1111/josh.12476
- Havik, T., Bru, E., and Ertesvåg, S. K. (2015). Assessing reasons for school non-attendance. *Scand. J. Educ. Res.* 59, 316–336. doi: 10.1080/00313831.2014.904424
- Hendron, M., and Kearney, C. A. (2011). Bridging the gap between assessment and treatment of youths with school refusal behavior: what to do when clients ask “what now?” *J. Clin. Psychol.* 2, 14–21.
- Karna, A., Voeten, M. J. M., Poskiparta, E., and Salmivalli, C. (2010). Vulnerable children in varying classroom contexts: Bystanders’ behaviors moderate the effect of risk factors on victimization. *Merrill-Palmer Q.* 56, 261–282. doi: 10.1353/mpq.0.0052
- Kearney, C. A. (2002). Identifying the function of school refusal behavior: a revision of the school refusal assessment scale. *J. Psychopathol. Behav. Assess.* 24, 235–245. doi: 10.1023/A:1020774932043
- Kearney, C. A. (2008). School absenteeism and school refusal behavior in youth: a contemporary review. *Clin. Psychol. Rev.* 28, 451–471. doi: 10.1016/j.cpr.2007.07.012
- Kearney, C. A., and Albano, A. (2004). The functional profiles of school refusal behavior: diagnostic aspects. *Behav. Modif.* 28, 147–161. doi: 10.1177/0145445503259263
- Kearney, C. A., and Albano, A. M. (2018). *When children refuse school: Therapist guide*. New York, NY: Oxford University Press.
- Kearney, C. A., and Silverman, W. K. (1993). Measuring the function of school refusal behavior: the school refusal assessment scale. *J. Clin. Child Psychol.* 22, 85–96. doi: 10.1207/s15374424jccp2201_9
- Kowalski, R. M., Giumetti, G. W., Schroeder, A. N., and Lattanner, M. R. (2014). Bullying in the digital age: a critical review and meta-analysis of cyberbullying research. *Psychol. Bull.* 140, 1073–1137. doi: 10.1037/a0035618
- Marques, T. P., Marques-Pinto, A., Álvarez, M. J., and Pereira, C. R. (2018). Facebook: risks and opportunities in Brazilian and Portuguese youths with different levels of psychosocial adjustment. *Span. J. Psychol.* 21:E31. doi: 10.1017/sjp.2018.34
- Mihalas, S. (2014). “School refusal behavior” in *Translating psychological research into practice*. eds. L. Grossman and S. Walfish (Washington, DC: American Psychological Association), 85–88.
- Ministry of Education and Vocational Training (2018). *Datos y cifras. Curso escolar 2018–2019 [Data and numbers. 2018–2019 academic year]*. Secretaría General Técnica: Madrid.
- Morin, H. K., Bradshaw, C. P., and Kush, J. M. (2018). Adjustment outcomes of victims of cyberbullying: the role of personal and contextual factors. *J. Sch. Psychol.* 70, 74–88. doi: 10.1016/j.jsp.2018.07.002
- Organization for Economic Cooperation and Development (2016). *Programme for international student assessment (PISA)*. Madrid, España: Ministerio de Educación, Cultura y Deporte.
- Richards, H. J., and Hadwin, J. A. (2011). An exploration of the relationship between trait anxiety and school attendance in young people. *Sch. Ment. Heal.* 3, 236–244. doi: 10.1007/s12310-011-9054-9
- Sanmartín, R., Inglés, C. J., González, C., Vicent, M., Ruiz-Esteban, C., and García-Fernández, J. M. (2018). Impact of affective profiles on school refusal in a Spanish sample of primary education. *J. Child Fam. Stud.* 27, 1349–1357. doi: 10.1007/s10826-017-0962-7
- Schultze-Krumholz, A., Hess, M., Pfetsch, J., and Scheithauer, H. (2018). Who is involved in cyberbullying? Latent class analysis of cyberbullying roles and their associations with aggression, self-esteem, and empathy. *J. Psychol. Res. Cyber.* 12:2. doi: 10.5817/CP2018-4-2
- Schreiber, J. B. (2017). Latent class analysis: an example for reporting results. *Res. Soc. Adm. Pharm.* 13, 1196–1201. doi: 10.1016/j.sapharm.2016.11.011
- Seçer, I. (2014). The adaptation of school refusal assessment scale into Turkish: reliability and validity studies. *Pak. J. Stat.* 30, 1197–1202.
- Smeets, K. C., Oostermeijer, S., Lappenschaar, M., Cohn, M., van der Meer, J. M. M., Popma, A., et al. (2017). Are proactive and reactive aggression meaningful distinctions in adolescents? A variable- and person-based approach. *J. Abnorm. Child Psychol.* 45, 1–14. doi: 10.1007/s10802-016-0149-5
- Smith, P. K., and Steffgen, G. (2013). *Cyberbullying through the new media: Findings from an international network*. London, England: Psychology Press.
- Steiner, R. J., and Rasberry, C. N. (2015). Brief report: associations between in-person and electronic bullying victimization and missing school because of safety concerns among U.S. high school students. *J. Adolesc.* 43, 1–4. doi: 10.1016/j.adolescence.2015.05.005
- Vicent, M., Inglés, C. J., Sanmartín, R., González, C., and García-Fernández, J. M. (2018). Aggression profiles in the Spanish child population: differences in perfectionism, school refusal and affect. *Front. Behav. Neurosci.* 12, 1–9. doi: 10.3389/fnbeh.2018.00012
- Walter, D., Bialy, J. V., Wirth, E. V., and Doepfner, M. (2017). Psychometric properties of the German school refusal assessment scale-revised. *J. Psychoeduc. Assess.* 36, 644–648. doi: 10.1177/0734282916689641
- Wilson, V., Malcolm, H., Edward, S., and Davidson, J. (2008). Bunking off: the impact of truancy on pupils and teachers. *British Educ. Res. J.* 34, 1–17. doi: 10.1080/01411920701492191
- World Medical Association (2013). *Declaration of Helsinki. Ethical principles for medical research in humans*. Available at: <http://www.wma.net/es/30publications/10policies/b3/> (Accessed October, 2013).
- Wright, M. F. (2015). Adolescents’ cyber aggression perpetration and cyber victimization: the longitudinal associations with school functioning. *Soc. Psychol. Educ.* 18, 653–666. doi: 10.1007/s11218-015-9318-6

Wright, M. F. (2019). "Cyberbullying: prevalence, characteristics, and consequences" in *Analyzing human behavior in cyberspace*. ed. Y. Zheng (Pennsylvania, USA: IGI Global), 167–191.

Conflict of Interest Statement: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2019 Delgado, Martinez-Monteagudo, Ruiz-Esteban and Rubio. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



Residential Mobility Among Elementary School Students in Los Angeles County and Early School Experiences: Opportunities for Early Intervention to Prevent Absenteeism and Academic Failure

Gabrielle Green¹, Amelia DeFosset¹ and Tony Kuo^{1,2,3,4*}

¹ Division of Chronic Disease and Injury Prevention, Los Angeles County Department of Public Health, Los Angeles, CA, United States, ² Department of Family Medicine, David Geffen School of Medicine at UCLA, Los Angeles, CA, United States, ³ Department of Epidemiology, UCLA Fielding School of Public Health, Los Angeles, CA, United States, ⁴ Population Health Program, UCLA Clinical and Translational Science Institute, Los Angeles, CA, United States

OPEN ACCESS

Edited by:

Christopher Kearney,
University of Nevada, Las Vegas,
United States

Reviewed by:

Tiffany M. Powell-Wiley,
National Institutes of Health (NIH),
United States
Nina Klang,
Uppsala University, Sweden

*Correspondence:

Tony Kuo
tkuo@ph.lacounty.gov

Specialty section:

This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Psychology

Received: 28 June 2019

Accepted: 10 September 2019

Published: 10 October 2019

Citation:

Green G, DeFosset A and Kuo T
(2019) Residential Mobility Among
Elementary School Students in Los
Angeles County and Early School
Experiences: Opportunities for Early
Intervention to Prevent Absenteeism
and Academic Failure.
Front. Psychol. 10:2176.
doi: 10.3389/fpsyg.2019.02176

School connectedness is closely linked to academic success: students who are engaged at school have better attendance and academic performance, and are less likely to drop out. Residential mobility – having moved homes – can increase the risk of a negative academic trajectory (e.g., absenteeism and academic failure). Increasing housing instability in the United States due to rising housing costs, especially in urban areas, has made residential mobility a growing concern. While existing research has examined residential mobility among students and its connection to long-term consequences such as absenteeism and academic failure, less is known about how residential mobility relates to potential intermediate school experiences (e.g., school disconnectedness, low perceived academic ability, and experiences with school violence and harassment) that contribute to a negative academic trajectory. This study examines associations between residential mobility in elementary school and school experiences in a large urban jurisdiction. Data were collected from a sample of public elementary school students in Los Angeles County (5th grade, $n = 5,620$) via the California Healthy Kids Survey (2013–2014). Descriptive, Chi-square, multiple logistic regression analyses, and predicted probabilities were performed to examine the relationships between past-year residential mobility and indicators of school connectedness and school-based relationships, perceived academic performance, and exposure to violence and harassment. More than a third (36.6%) of students in the analysis sample moved at least once in the past year. After adjusting for neighborhood and family factors, a higher number of past-year moves was significantly associated with poorer school experiences, including lower odds of school connectedness for high-movers (2+ moves) [adjusted odds ratio (AOR) = 0.77; 95% confidence interval (CI) = 0.68–0.86], compared to non-movers. Movers had lower odds of perceived academic ability (1 move: AOR = 0.72; CI = 0.63–0.83; 2+ moves: AOR = 0.55;

CI = 0.44–0.69), but higher odds of exposure to violence and harassment as a victim (1 move: AOR = 1.26, CI = 1.17–1.37; 2+ moves: AOR = 1.34, CI = 1.17–1.54), and as a perpetrator (1 move: AOR = 1.21, CI = 1.08–1.36; 2+ moves: AOR = 1.54, CI = 1.24–1.92). These results highlight the value of developing and implementing strategies that can identify and support students who move at young ages, to prevent student disengagement and promote attendance and academic success early in their life trajectory.

Keywords: residential mobility, school connectedness, chronic absenteeism, elementary school, academic success

INTRODUCTION

Regular school attendance, and the closely and reciprocally linked issue of school connectedness, strongly predict academic success (Centers for Disease Control and Prevention, 2018). However, an estimated 7 million youth are chronically absent each year (missing 15 or more school days), representing 14–20% of elementary and secondary school students, respectively (Department of Education, 2019). School disconnectedness is the perception that adults and peers at school do not care about a student's academic and personal well-being (Ashley et al., 2012). School disconnectedness often manifests alongside absenteeism (Blum, 2005), which in turn correlates with academic failure and dropout (National Collaborative on Education and Health, 2015), and a number of interrelated risk behaviors including involvement in bullying, frequent discipline problems, and substance use (Gastic, 2008). Existing conceptual models suggest that school attendance, connectedness, and academic success result from the interaction of factors related to the child, peers, school, family, and community (Freudenberg and Ruglis, 2007; Kearney, 2008; Tyler and Lofstrom, 2009; Gee and Krausen, 2015). Since educators have limited power to intervene on community and family factors that undermine academic success, anticipating and promptly recognizing their impacts represent a critical approach to prevent or mitigate harm. This paper will focus on one such factor: residential mobility.

Residential mobility – having moved homes – can be detrimental to academic success, even when the student remains at the same school (Voight et al., 2012). Residential mobility is inversely associated with school readiness (Ziol-Guest and McKenna, 2014), attendance (Ersing et al., 2009), academic performance (e.g., test scores, grade point averages), grade progression, and graduation (Scanlon and Devine, 2001). Approximately 11% of youth aged 1–17 move homes in a given year (U.S. Census Bureau, 2018). Whether a family moves for a positive reason (e.g., a new job, larger home, or safer neighborhood) or a negative one (e.g., divorce, job loss, or housing instability), moving can be a disruptive and stressful event in a child's life (Coulton et al., 2012; Mollborn et al., 2018). Residential mobility is higher among low-income individuals, renters, and racial/ethnic minority groups (Jelleyman and Spencer, 2008), suggesting socioeconomic vulnerability plays a role. With housing costs on the rise, particularly for renters (Sparshott, 2015), it is possible that residential mobility may also

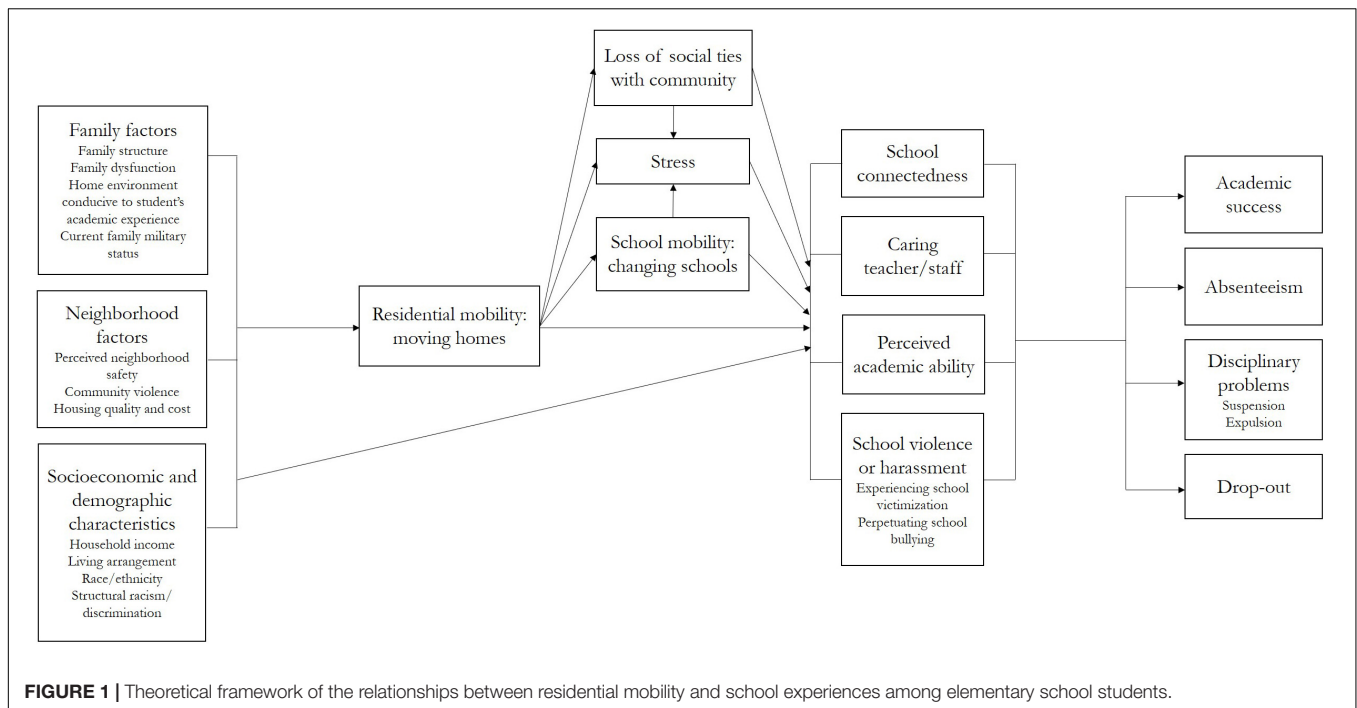
increase in coming years. Identifying the early warning signs exhibited by “movers” could allow schools to provide targeted supports before attendance falters and students start to struggle academically. The pathways through which residential mobility may ultimately influence academic failure, and the contribution of likely intermediate factors such as school disconnectedness, have not been fully described in the literature, prompting calls for additional work in this area (Scanlon and Devine, 2001; Jelleyman and Spencer, 2008; Anderson et al., 2014).

This study examined the relationships between residential mobility and potential cognitive and behavioral precursors to absenteeism and academic failure that have been less explored in the literature. A primary goal was to provide preliminary information that could aid researchers in conceptualizing and testing more nuanced pathways for how residential mobility impacts youth academic success, while also generating findings that could guide prevention strategies among youth-serving institutions, especially schools. To that end, this study uses data from a large, sample of elementary school students to analyze the associations between level of residential mobility and school experiences such as school connectedness, perceived academic ability, and exposure to violence and harassment. Although a body of literature speaks to the strong relationship between these school experiences and poor academic outcomes, including absenteeism and academic failure, research has not thoroughly examined their potential role in the pathways linking residential mobility to academic outcomes (Gasper et al., 2010; Voight et al., 2017). Furthermore, the way these processes play out at younger ages has been relatively less characterized in the literature (Lawrence et al., 2015; Beck et al., 2016), despite findings that younger students are more vulnerable to the negative effects of moving (Scanlon and Devine, 2001), and the likelihood that problems encountered in elementary school will compound over time (Lawrence et al., 2015).

MATERIALS AND METHODS

Theoretical Framework

The study team developed a theoretical framework to guide the present analysis, depicting the relationship between residential mobility among elementary school students and their experiences at school (**Figure 1**). Building upon prior research, this framework centers on the hypothesis that students who have



moved are more likely to have poorer school experiences, and this association may be heightened among students who have more exposure, compared to students who have less exposure, to residential mobility.

This framework posits that a broad set of neighborhood, family, and socioeconomic/demographic factors influence whether youth experience residential mobility. Neighborhood conditions, such as perceived safety, level of neighborhood crime or violence, and housing quality and cost, can be driving forces behind a residential move. Family dynamics can also provoke a residential move, due to changes to family structure (e.g., a divorce) or family dysfunction (e.g., physical or emotional abuse, substance use) (Astone and McLanahan, 1994; Dong et al., 2005). A family's current military status is also linked to residential mobility: youth in military families are more likely to change residences than youth in civilian families (Child and Family Research Partnership, 2017). Regarding socioeconomic and demographic factors, low-income families may be more vulnerable to fluctuations in housing costs, and therefore be more likely to move, often to a substandard residence (e.g., housing that is unsafe and unhealthy to live in) (Skobba and Goetz, 2013; Kang, 2019) or an unstable living arrangement (e.g., a relative's home or a shelter) (Skobba and Goetz, 2013). However, a change in household income, such as a change to a higher-paying job, could precipitate a move to a higher quality residence. Furthermore, structural factors such as racism and discrimination may contribute to the high rates of residential mobility seen among non-white youth (Turner and Ross, 2005; Acevedo-Garcia et al., 2008; Perkins, 2017). It is also well documented that the factors identified in this theoretical framework as influencing the likelihood of a residential move – neighborhood conditions, family dynamics,

a household member currently serving in the military, and socioeconomic/demographic characteristics (e.g., household income, structural racism/discrimination) – independently influence a student's school experiences (Woolley and Grogan-Kaylor, 2006; Spriggs et al., 2007; Felix et al., 2009; Mmari et al., 2010; Herbers et al., 2012; Anderson et al., 2014; U.S. Department of Housing and Urban Development, 2014; Low et al., 2017; National Education Association, 2019).

When these factors lead to residential mobility, the act of moving homes can immediately impact youth. The move itself can be a stressful event (e.g., parents may be under strain during the transition from the old home to the new, and/or youth may be emotional about leaving their old home) (Murphey et al., 2012; Mollborn et al., 2018). In addition, the move from a familiar neighborhood can lead to a loss of social ties with that community (Anderson et al., 2014). Finally, the change in homes may also cause school mobility – a change in schools. These direct outcomes of residential mobility may subsequently influence youths' school experiences in three key ways. First, increased stress, loss of previous community-based relationships, and/or changing schools could all erode school-based relationships. Youth could pull away from peers and adults at school or struggle to reestablish these relationships at a new school, undermining both a broader sense of school connectedness and relationships with caring teachers or staff. Second, students who move may also experience a disruption to their study habits or routines, potentially causing academic performance to falter (even briefly), which could lead to lower perceived academic ability, or confidence in their school work. Third, students who have moved may be more likely to be exposed to violence or harassment at school – either as a victim or as a perpetrator. If students who move are less connected to

individuals at school, feel less frequently supported by teachers, and struggle more academically, it follows that these students may also be more vulnerable to being the victim of violence or harassment from other students, and may also be more likely to act out and instigate bullying (Gasper et al., 2010).

A robust literature base supports the associations between the school experiences examined in this study (school connectedness, relationships with caring teachers and staff, perceived academic ability, and experiences with school-based violence and harassment) and academic outcomes for youth: students who have poor school experiences may be at a higher risk of absenteeism, poor grades, suspension/expulsion, or drop-out (Voight et al., 2012). Students who feel connected to school are more likely to attend school regularly, earn good grades, avoid disciplinary problems such as school suspension, and to stay in school through graduation (Centers for Disease Control and Prevention, 2009; Sheryl et al., 2014). Positive teacher–student relationships have been linked to these same outcomes, as well as a lower incidence of behavioral problems, as students feel more supported at school and more motivated to learn (Quin, 2017). Students with confidence in their academic ability are more likely to earn good grades (Marsh and Martin, 2011). Finally, school-based violence and harassment are negatively linked to students' academic outcomes: students who are bullied are more likely to have increased absenteeism (Steiner and Rasberry, 2015) and poor grades (Juvonen et al., 2011; Ladd et al., 2017), while students who bully others are more likely to drop out of school (U.S. Department of Health and Human Services, 2019).

Instrument

The current study uses student-level data from the 2013 to 2014 elementary school version of the California Healthy Kids Survey (CHKS). Developed by WestEd in conjunction with the California Department of Education (CDE), the CHKS is designed to provide information regarding risk behaviors and protective factors among California's school-age population. Questions are largely adapted from the Biennial California Student Survey and the Youth Risk Behavior Survey, which measure similar constructs at a national level (WestEd, 2019). Available annually to school districts in California, the CHKS comprises an elementary school version targeted to fifth grade students, a middle school version for seventh grade students, and a high school version that can be administered to ninth and eleventh grade students. The elementary CHKS includes a mandatory core module, as well as six optional supplemental modules centered on targeted topics; districts may also elect to design a custom module (California Healthy Kids Survey, 2019). It is voluntary for districts to administer the CHKS and there is a fee to do so. However, there are some cases in which districts receive funding that specifically require (and financially support) CHKS administration, such as the Title IV Safe and Drug-Free Schools and Communities program, the Safe and Supportive Schools grant, and the Tobacco Use Prevention Education program (Adams, 2013; Austin, 2013; California Department of Education, 2019).

California Healthy Kids Survey data have been used in numerous research studies to examine topics such as: substance

use and/or exposure to violence and harassment (Wong et al., 2004; Felix et al., 2009; Russell et al., 2012; Gilreath et al., 2014b; Bostean et al., 2015), military-connected youth risk behaviors (Gilreath et al., 2013, 2014a; Cederbaum et al., 2014; Sullivan et al., 2015), school health center use (Amaral et al., 2011; Stone et al., 2013; Lewis et al., 2015), gang membership (Estrada et al., 2013; Lenzi et al., 2015), asthma prevalence (Davis et al., 2006, 2007), school climate (O'Malley et al., 2015), television and video game habits (Armstrong et al., 2010), and gender identity (Perez-Brumer et al., 2017), primarily using cross-sectional observational study designs. The study team collaborated with WestEd in 2015 to obtain data for all students in the county who completed the CHKS between 2000 and 2015, to inform planning of school-related health and wellness initiatives.

Administration and Sampling

The CHKS is designed to be administered either in print or online at the school site (additional details on sampling are provided below), typically during the fall or spring. For the elementary CHKS, active parental consent is required; a student who does not turn in a written permission form from a parent or guardian will not be administered the CHKS. The survey does not collect identifying information, and students and their families are informed that responses are anonymous.

WestEd provides districts with guidelines on how to survey at the school and student level to generate results that are maximally representative of the target grade level. Participating districts are advised to survey *all* students in a selected grade level if either of the following criteria is met: (a) the district has 10 or fewer schools with that selected grade level, or (b) the district has 900 or fewer enrolled regular students at the selected grade level. If neither criterion is met, the district is eligible to randomly sample students in consultation with a technical advisor from WestEd, however, sampling is not required (Austin et al., 2013). In addition, the survey should be administered during an appropriate class period (determined in consultation with WestEd), such as a required class attended by all enrolled students in the selected grade, and 100% of selected classrooms should participate. Following data collection, WestEd provides data quality standards to gauge the representativeness and validity of collected data. In addition to following the appropriate survey strategy (based on sampling criteria described above), data were considered sufficiently valid in 2013–2014 (the study year, see below) if: (a) 70% or more of parents in the selected sample completed the consent form, or (b) 60% or more of students in a participating grade returned a complete and usable questionnaire. A 70% response rate was considered good, and 60–69% was considered acceptable, but borderline (Austin et al., 2013).

The present study represents a secondary analysis of Los Angeles County's elementary school CHKS dataset (as described above), focusing on the 2013–2014 academic year, which is the most recent year that a question on residential mobility was available. The study team conducted a two-stage review and selection process to develop the analysis sample. First, the study team conducted a confirmatory review to ensure all data met basic parameters for participating in the elementary CHKS: (1)

it was collected from a public school district with elementary grades, (2) from students in the fifth grade (encompassing ages 9–12), and (3) in Los Angeles County. Additionally, to maximize comparability across educational contexts, charter schools were excluded during this stage. During the second stage, district-level data were reviewed to assess adherence to minimum quality standards, as outlined by WestEd (see above). Because district-level sampling plans were not available to the study team, districts were first categorized as non-sampling eligible or sampling eligible (based on publicly available data from CDE regarding number of schools and student enrollment during the study year). Non-sampling eligible districts (where 100% of students should have been surveyed) were excluded if they did not achieve a response rate of at least 60% of enrolled students (the minimum threshold for data to be classified as acceptable by WestEd). For sampling eligible districts, it was assumed that an approved sampling plan was followed.

Measures

The following measures from the elementary CHKS were selected due to their alignment with the study's theoretical framework.

Residential Mobility

Residential mobility was assessed using the single question, "During the past year, how many times have you moved (changed where you live)?" Response options were: "0 times," "1 time," and "2 or more times." In this study, students were categorized as non-movers (those that answered "0 times"), low-movers ("1 time"), or high-movers ("2 or more times").

Family and Neighborhood Factors

Perceived neighborhood safety was examined through one question: "Do you feel safe outside of school?" Response options were: "never," "some of the time," "most of the time," and "all of the time." A dichotomous variable was created (never/some versus most/all). A home environment conducive to the student's academic experience was examined through one question: "Does a parent or some other grown-up at home care about your schoolwork?" Response options were: "never," "some of the time," "most of the time," and "all of the time." These responses were collapsed into a dichotomous variable (all versus most/some/never). Current family military status was measured through one question: "Is your father, mother, or caretaker currently in the military?" Response options were "no," "yes," and "don't know." Responses of "don't know" were coded as missing.

School Experiences

School connectedness

School connectedness was measured using a scale developed by WestEd that was adapted from the National Longitudinal Study on Adolescent Health (Austin et al., 2013; WestEd, 2014). The scale was constructed using responses to five questions: "Do you feel close to people at school?", "Are you happy to be at this school?", "Do you feel like you are part of this school?", "Do teachers treat students fairly at school?", and "Do you feel safe at school?" Response options for all questions were "never," "some of the time," "most of the time," and "all of the time";

which were numerically coded as 1, 2, 3, and 4, respectively, and summed to obtain the scale value for school connectedness, with higher values representing greater school connectedness. Cronbach's alpha for the scale was 0.69. The scale value was divided by five to obtain an average question response score. A dichotomous variable was developed to measure a high level of school connectedness compared to a moderate/low level, based on parameters used by WestEd: respondents were labeled as "high" if their average question response score was greater than three, while students with an average less than or equal to three were labeled as "moderate/low."

Caring teacher/staff

The presence of caring teachers or school staff was examined through one survey item: "At my school, there is a teacher or some other adult who really cares about me." Response options were: "never," "some of the time," "most of the time," and "all of the time." Responses were dichotomized as never/some of the time and most/all of the time.

Perceived academic ability

Perceived academic ability was measured using a question designed to assess achievement among elementary-aged students: "How well do you do in your schoolwork?" Answer choices were: "I'm one of the best students," "I do better than most students," "I do about the same as others," and "I don't do as well as most others." A dichotomous variable was created, in which "above average" comprised the options "I'm one of the best students" and "I do better than most students," while "average or below" represented "I do about the same as others" and "I don't do as well as most others."

School violence or harassment

Three types of exposure to violence and harassment as a victim in the past year were assessed separately. First, respondents were asked, "Do other kids hit or push you at school when they are not just playing around?" and "Do other kids at school spread mean rumors or lies about you?" For both questions, the answer choices were: "never," "some of the time," "most of the time," and "all of the time." Responses were dichotomized as "yes" (comprising "some of the time," "most of the time," and "all of the time") and "no" ("never"). The third question was: "Have other kids at school ever teased you about what your body looks like?" Answer choices were "yes" or "no."

Two types of exposure to violence and harassment as a perpetrator in the past year were examined through two separate questions. Students were asked, "During the past year, how many times have you hit or pushed other kids at school when you were not playing around?" and "During the past year, how many times have you spread mean rumors or lies about other kids at school?" For both questions, the answer choices were: "0 times," "1 time," "2 times," or "3 or more times." Responses to each question were converted into a dichotomous variable: "yes" (comprising "1 time," "2 times," and "3 or more times") and "no" ("0 times").

Data Analysis

First, descriptive statistics were generated to characterize the distribution of variables of interest in the sample. Second,

Chi-square analyses examined bivariate associations between residential mobility and all other analysis variables: school connectedness, caring teachers/staff, perceived academic ability, exposure to violence and harassment, perceived neighborhood safety, presence at home of an adult who cared about the student's schoolwork, and current family military status. Third, multiple logistic regression analyses examined the relationships between residential mobility and school experiences, controlling for perceived neighborhood safety, presence at home of an adult who cared about the student's schoolwork, and current military status. The regression models were adjusted for clustering to account for the potential correlation of responses by school district. Fourth, to facilitate interpretation of regression results, post-estimation analyses were conducted. Specifically, the predicted probability for each logistic regression was calculated using the sample means of the control variables; this approach adjusts for any systematic differences in these covariates. All analyses were performed using Stata 15.1 (Stata Corp. LP, College Station, TX, United States). The study was deemed exempt from review by the Institutional Review Board of the Los Angeles County Department of Public Health.

RESULTS

Sample

Sample Districts

Twenty-two public school districts in Los Angeles County participated in the elementary CHKS in 2013–2014, out of 67 eligible districts (i.e., districts that had at least one elementary school). **Figure 2** summarizes how districts were selected into the analysis sample through the two-stage review and selection process. Two districts were excluded during the first review stage: one district only administered the CHKS to charter schools, while the other district only administered the survey to fourth graders. The second review stage focused on adherence to minimum data quality standards; nine districts were categorized as sampling eligible, and were therefore included in the analysis sample. The remaining 11 districts were categorized as non-sampling eligible, thus requiring a response rate of 60% or above; 8 districts fell below this threshold and were excluded. The final analysis sample therefore had 12 districts.

To provide additional context, district-level characteristics that are known to be related to residential mobility and/or risk behaviors impacting academic success (Voight et al., 2012, 2017; Metzger et al., 2015), but that were not captured at the student level by the CHKS, were examined in comparison to all other districts in Los Angeles County that had at least one school with a fifth grade class (**Table 1**). The 12 districts in the analysis sample were somewhat smaller (lower mean total enrollment and a lower mean fifth grade enrollment) than the 64 other districts, likely because the most populous school district in the county was not part of the sample (with a total district enrollment eight times bigger than the next most populous district). In terms of fifth grade demographics, analysis sample districts had a slightly higher proportion of non-Hispanic white students, and a lower proportion of Hispanic/Latino and Asian students. Enrollment

in the free/reduced price meal program was about 10 percentage points lower in the analysis sample districts. The truancy rate was slightly lower in the analysis sample districts. For districts with high school grades (grades 9–12), the adjusted high school drop-out rate was marginally higher in analysis sample districts.

Sample Students

The characteristics of the analysis sample are presented in **Table 2**. In total, 7,230 fifth grade students met criteria for inclusion in the analysis sample. A further 1,610 respondents were excluded from the analysis because they had missing data for any of the variables of interest (using a listwise deletion approach), resulting in a final analysis sample containing 5,620 student respondents across the 12 school districts.

Over a third of respondents (36.6%) reported past-year residential mobility: 21.7% of respondents were low-movers (moved once) and 14.9% were high-movers (moved two or more times), while the remaining two-thirds (63.5%) were classified as non-movers. Over two-thirds (68.8%) of respondents reported a high level of school connectedness, and most students (85.7%) felt that teachers or school staff cared about them all or most of the time. Regarding perceived academic ability, about half of students (49.3%) believed that they were performing above average. In terms of past-year exposure to violence and harassment at school as a victim, 36.7% of students reported being hit or pushed, 40.2% reported having had rumors or lies spread about them, and 26.3% said they had been teased about their body. In terms of past-year perpetration of violence and harassment at school, 28.8% of students reported having hit or pushed a classmate, and 22.9% reported having spread rumors or lies about a classmate.

Relationships Between Residential Mobility and School Experiences

Chi-Square Associations

Chi-square analyses revealed significant bivariate associations between residential mobility and all other analysis variables (**Table 2**). Movers had poorer school experiences than non-movers; among movers, high-movers fared worse than low-movers. Among high-movers, 62.3% had a high level of school connectedness, compared to 66.9% of low-movers and 71.0% of non-movers. High-movers also had the lowest rate (82.5%) of reporting that a teacher or staff member cared about them all or most of the time, compared to low-movers (84.8%) and non-movers (86.7%). Only 37.3% of high-movers felt that they were performing above average academically, compared to 44.9% of low-movers and 53.6% of non-movers. Both exposure to, and perpetration of, violence or harassment were higher among movers than non-movers, with high-movers having the highest rates. High-movers had rates of violence approximately 10 percentage points above non-movers: 43.4% of high-movers had been hit or pushed, compared to 40.3% of low-movers and 33.9% of non-movers. Similarly, 37.3% of high-movers reported hitting or pushing a classmate, compared to 30.7% for low-movers, and 26.1% for non-movers. Almost half (48.4%) of high-movers had rumors or lies spread about them; rates were 41.4% for low-movers and 37.8% for non-movers. Nearly a third (31.3%) of high-movers had been teased about their body, versus 28.0%

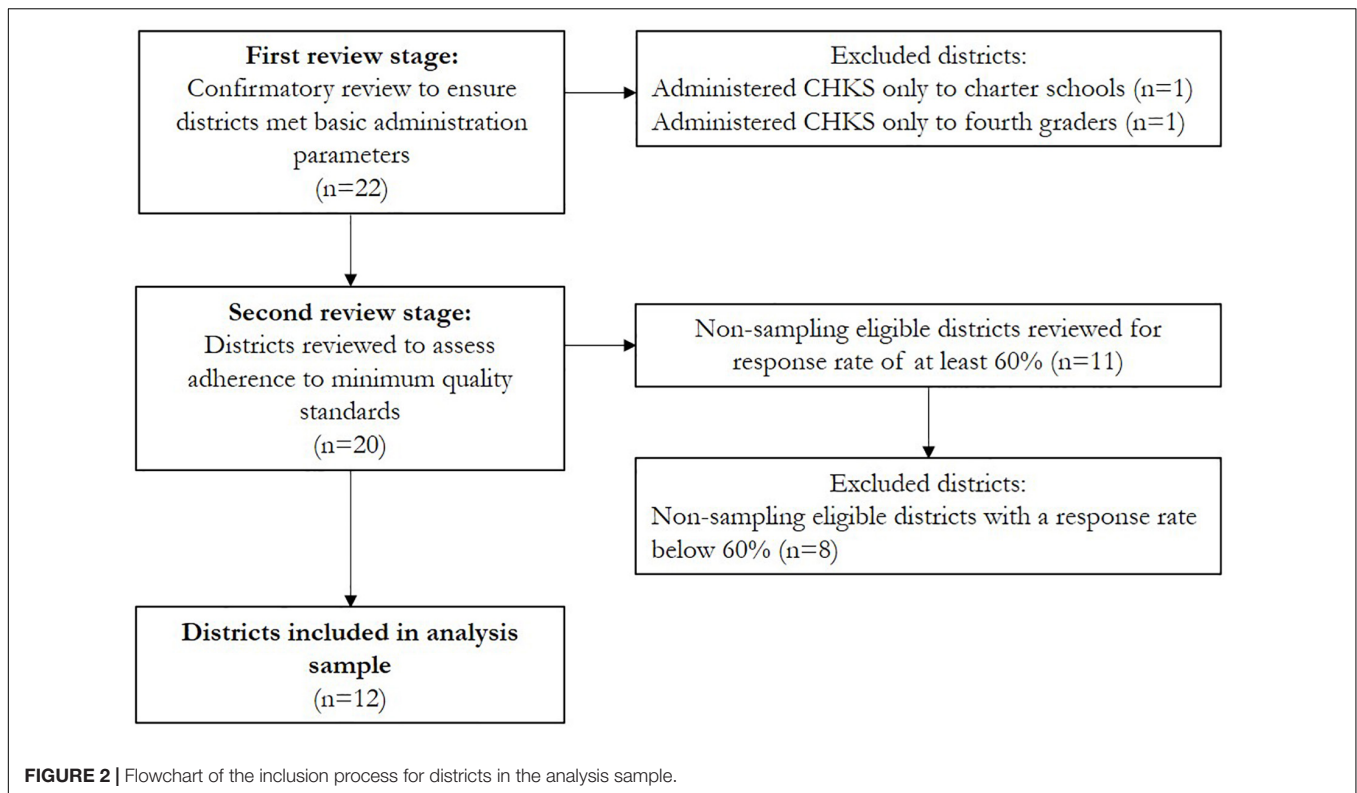


TABLE 1 | Characteristics of school districts participating in the 2013–2014 elementary California Healthy Kids Survey and school districts not in the analysis sample, Los Angeles County^{1,2,3,4}.

Characteristic	CHKS school districts in analysis sample (n = 12)			School districts not in analysis sample (n = 64)		
	Mean (SD)	Min	Max	Mean (SD)	Min	Max
Total enrollment						
Entire district	14,172 (8,574)	3,132	29,951	20,570 (81,191)	253	653,826
5th grade only	1,030 (632)	241	2,136	1,595 (6,186)	35	49,885
Percentage of 5th grade students in race/ethnic category						
Hispanic/Latino	50.2 (40.2)	6.8	98.1	55.5 (26.2)	9.7	97.7
Non-Hispanic White	28.6 (29.3)	0.2	74.8	22.4 (22.2)	0.3	80.6
Asian	7.4 (8.3)	0.0	27.4	11.6 (17.6)	0.0	66.3
Black/African-American	4.2 (5.7)	0.2	18.6	5.6 (7.7)	0.0	40.0
Two or more races	3.7 (4.9)	0.0	15.2	2.2 (2.5)	0.0	11.4
American Indian or Alaskan native	4.4 (14.8)	0.0	51.5	0.2 (0.3)	0.0	1.1
Filipino	1.6 (2.0)	0.0	6.4	2.1 (2.1)	0.0	11.4
Pacific Islander	0.4 (0.4)	0.0	1.3	0.3 (0.3)	0.0	1.9
Not reported	0.08 (0.2)	0.0	0.5	0.7 (0.9)	0.0	4.0
Percentage of 5th grade students qualifying for free/reduced price meals	49.9 (39.8)	2.9	93.6	59.4 (26.5)	1.4	99.7
Truancy rate⁵	18.4 (11.2)	6.0	31.7	22.9 (14.1)	0.0	57.3
Adjusted drop-out rate, grades 9–12⁶	3.2 (4.7)	0.0	14.8	2.5 (3.5)	0.0	16.0

¹Data publicly available from the California Department of Education website (<https://www.cde.ca.gov>) for the year 2013–2014. ²"School districts not in analysis sample": Los Angeles County public school districts with 1 + fifth grade class in 2013–2014, but either did not administer the elementary CHKS that year or did not meet this study's inclusion criteria. ³Values for count variables are rounded to the nearest whole number. Percentages may not add to 100 due to rounding. ⁴Some variables include fewer districts, either due to unavailable data or non-applicability of the variable (i.e., adjusted drop-out rate is for grades 9–12; as such, districts that do not have these grades are not included). ⁵Data represent the district-wide truancy rate, which may include schools that do not serve 5th graders. Details on how the truancy rate is calculated are available on the California Department of Education website. ⁶The adjusted drop-out rate is calculated for districts that have high school grades (grades 9–12). Details on how the adjusted drop-out rate is calculated are available on the California Department of Education website.

TABLE 2 | Chi-square associations between residential mobility status and school experiences, family and neighborhood experiences, and student demographics, among respondents of the elementary California Healthy Kids Survey in Los Angeles County public school districts, 2013–2014¹.

	Full sample (<i>n</i> = 5,620)	Non-mover (<i>n</i> = 3,566)	Low-mover (<i>n</i> = 1,218)	High-mover (<i>n</i> = 836)	<i>p</i> -value
	Column %	Column %	Column %	Column %	
School experience					
School connectedness					
High level	68.8	71.0	66.9	62.3	<0.001***
Moderate/low level	31.2	29.0	33.1	37.7	
Teacher or staff cares about student					
All or most of the time	85.7	86.7	84.8	82.5	0.006**
Sometimes or never	14.3	13.3	15.2	17.5	
Perceived academic ability					
Above average	49.3	53.6	44.9	37.3	<0.001***
Average or below	50.7	46.4	55.1	62.7	
Exposure to violence or harassment (victim)					
Been hit or pushed (yes)	36.7	33.9	40.3	43.4	<0.001***
Had rumors or lies spread (yes)	40.2	37.8	41.4	48.4	<0.001***
Been teased about body (yes)	26.3	24.6	28.0	31.3	<0.001***
Perpetrator of violence or harassment					
Hit or pushed a classmate (yes)	28.8	26.1	30.7	37.3	<0.001***
Spread rumors or lies about a classmate (yes)	22.9	20.1	26.1	30.3	<0.001***
Family and neighborhood factors					
Perceived neighborhood safety					
All or most of the time	71.3	73.8	69.5	63.6	<0.001***
Sometimes or never	28.7	26.2	30.5	36.4	
Adult at home cares about student's schoolwork					
All the time	83.0	83.7	83.1	79.8	0.028*
Less than all the time	17.1	16.4	16.9	20.2	
Current family military status					
Parent or caretaker in the military (yes)	9.1	7.3	10.6	14.5	<0.001***

¹ Statistically significant, **p* < 0.05; ***p* < 0.01; ****p* < 0.001.

for low-movers and 24.6% for non-movers. An estimated 30.3% of high-movers had spread rumors or lies about a classmate, compared to 26.1% of low-movers and 20.1% of non-movers. Family and neighborhood factors were significantly associated with residential mobility in expected directions: compared to non-movers, movers (especially high-movers) had lower rates both of feeling safe in their neighborhood and of having an adult at home that cared about their schoolwork, and had a greater rate of having a parent or caretaker currently in the military.

Multiple Logistic Regressions and Predicted Probabilities

Multiple logistic regression analyses examined the relationship between residential mobility and school experiences, controlling for perceived neighborhood safety, presence of an adult at home that cares about the student's schoolwork, and current family military status (Table 3). Post-estimation tests were conducted on the above regression models to generate predicted probabilities of school experiences by mobility status at the sample means of the control variables (Table 4).

Generally, past-year moving was associated with poorer school experiences (Table 3). In adjusted regression analysis, high-movers had significantly lower odds of reporting a high level of school connectedness [adjusted odds ratio (AOR) = 0.77;

95% confidence interval (CI) = 0.68–0.86] compared to non-movers, corresponding to a 65.7% predicted probability of having a high level of school connectedness, compared to 68.3% for low-movers and 71.4% for non-movers. Similarly, high-movers also had significantly lower odds of reporting that a teacher or staff member cared about them all or most of the time (AOR = 0.82; CI = 0.68–0.97); predicted probabilities were 84.7% for high movers, 85.9% for low movers, and 87.2% for non-movers. However, neither of these relationships (school connectedness, caring teachers/staff) was statistically significant for low-movers. Compared to non-movers, both high- and low-movers had significantly lower odds of perceiving their academic ability to be above average (high-movers: AOR = 0.55; CI = 0.44–0.69; low-movers: AOR = 0.72; CI = 0.63–0.83), translating into a predicted probability of 38.4% for high-movers, 45.1% for low-movers, and 53.2% for non-movers.

Results were somewhat uneven with regard to exposure to violence and harassment as a victim (Table 3). The odds of being hit or pushed were significantly higher for both high-movers (AOR = 1.34; CI = 1.17–1.54) and low-movers (AOR = 1.26; CI = 1.17–1.37). However, the odds of having rumors or lies spread about them were significantly higher only for high-movers (AOR = 1.40; CI = 1.22–1.60), while the odds of being teased about their body was significantly higher only for low-movers

TABLE 3 | Multiple regression model results: crude and adjusted odds ratios examining the relationships between school experiences and residential mobility among respondents of the elementary California Healthy Kids Survey in Los Angeles County public school districts, 2013–2014^{1,2,3,4,5}.

	High level of school connectedness OR (95% CI) AOR (95% CI)	Teacher/staff cares about student all or most of the time OR (95% CI) AOR (95% CI)	Above average perceived academic ability OR (95% CI) AOR (95% CI)	Been hit or pushed OR (95% CI) AOR (95% CI)	Had rumors or lies spread OR (95% CI) AOR (95% CI)	Been teased about body OR (95% CI) AOR (95% CI)	Hit or pushed a classmate OR (95% CI) AOR (95% CI)	Spread rumors or lies about a classmate OR (95% CI) AOR (95% CI)
Residential mobility								
Low-mover	0.83 (0.72–0.96)*	0.86 (0.73–1.01)	0.71 (0.61–0.82)**	1.32 (1.22–1.42)***	1.16 (1.02–1.32)*	1.19 (1.08–1.31)***	1.26 (1.13–1.40)***	1.40 (1.05–1.87)*
High-mover	0.86 (0.74–1.00)	0.90 (0.74–1.08)	0.72 (0.63–0.83)**	1.26 (1.17–1.37)***	1.11 (0.98–1.26)	1.14 (1.06–1.24)**	1.21 (1.08–1.36)**	1.36 (1.02–1.83)*
	0.68 (0.59–0.77)***	0.73 (0.62–0.86)**	0.52 (0.41–0.64)**	1.49 (1.30–1.72)***	1.54 (1.32–1.80)***	1.40 (1.08–1.81)**	1.69 (1.34–2.12)***	1.72 (1.38–2.15)***
	0.77 (0.68–0.86)***	0.82 (0.68–0.97)*	0.55 (0.44–0.69)***	1.34 (1.17–1.54)***	1.40 (1.22–1.60)***	1.26 (0.98–1.63)	1.54 (1.24–1.92)***	1.59 (1.28–1.97)***
Perceived neighborhood safety								
All or most of the time	2.32 (2.01–2.68)***	1.86 (1.59–2.16)***	1.60 (1.44–1.79)***	0.56 (0.49–0.64)***	0.54 (0.46–0.63)***	0.60 (0.51–0.70)***	0.75 (0.66–0.86)***	0.67 (0.57–0.79)***
Adult at home cares about student's schoolwork								
All the time	2.61 (2.31–2.96)***	2.20 (1.93–2.51)***	1.41 (1.16–1.71)**	0.68 (0.62–0.76)***	0.74 (0.65–0.84)***	0.77 (0.66–0.89)**	0.59 (0.51–0.67)***	0.58 (0.50–0.68)**
Current family military status								
Parent or caretaker in the military (yes)	0.72 (0.59–0.88)**	0.74 (0.60–0.90)**	0.83 (0.62–1.09)	1.77 (1.42–2.21)***	1.64 (1.45–1.85)***	1.79 (1.56–2.06)***	1.95 (1.56–2.44)***	1.44 (1.15–1.80)**

¹Statistically significant, * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. ²Adjusted for clustering within school districts. ³Reference categories: non-mover (residential mobility), sometimes or never (perceived neighborhood safety), most of the time or sometimes or never (adult at home cares about student's schoolwork), no (current military status). ⁴OR, odds ratio; CI, confidence interval. ⁵AOR, adjusted odds ratio.

TABLE 4 | Predicted probabilities of school experiences by residential mobility status among respondents of the elementary California Healthy Kids Survey in Los Angeles County public school districts, 2013–2014¹.

	Mobility status (%)		
	Non-mover (%)	Low-mover (%)	High-mover (%)
Level of school connectedness²			
High	71.4	68.3	65.7
Teacher or staff cares about student³			
All or most of the time	87.2	85.9	84.7
Perceived academic ability⁴			
Above average	53.2	45.1	38.4
Exposure to violence or harassment (victim)⁵			
Been hit or pushed (yes)	34.2	39.6	41.1
Had rumors or lies spread (yes)	38.2	40.7	46.3
Been teased about body (yes)	24.6	27.2	29.2
Perpetrator of violence or harassment⁶			
Hit or pushed a classmate (yes)	26.1	30.0	35.3
Spread rumors or lies about a classmate (yes)	20.0	25.5	28.4

¹Predicted probabilities are at the sample means of the control variables: perceived neighborhood safety, presence of an adult at home that cares about the student's schoolwork, and current family military status. ²In the adjusted logistic regression model, the odds of reporting a high level of school connectedness was significantly lower for high-movers than for non-movers ($p < 0.001$). ³In the adjusted logistic regression model, the odds of reporting that a teacher or staff member cared about them all or most of the time was significantly lower for high-movers than for non-movers ($p < 0.05$). ⁴In the adjusted logistic regression model, the odds of a student perceiving their academic ability to be above average was significantly lower for both low- and high-movers than for non-movers ($p < 0.001$). ⁵In the adjusted logistic regression model, relative to non-movers, the odds of having been hit or pushed was significantly higher for both low- and high-movers ($p < 0.001$), the odds of having had rumors or lies spread about them was significantly higher for high-movers ($p < 0.001$), and the odds of being teased about their body was significantly higher for low-movers ($p < 0.01$). ⁶In the adjusted logistic regression model, relative to non-movers, the odds of having hit or pushed a classmate was significantly higher for low-movers ($p < 0.01$) and high-movers ($p < 0.001$), and the odds of having spread rumors or lies about a classmate was significantly higher for low-movers ($p < 0.05$) and high-movers ($p < 0.001$).

(AOR = 1.14; CI = 1.06–1.24). Among the three measures of victimization, for both movers and non-movers, predicted probabilities were greatest for having rumors or lies spread (high-movers: 46.3%; low-movers: 40.7%; non-movers: 38.2%).

Both low and high moving were associated with increased odds of perpetuating violence or harassment (Table 3). Compared to non-movers, high-movers had greater odds of hitting or pushing a classmate (AOR = 1.54; CI = 1.24–1.92), translating into a 35.3% predicted probability, compared to 30.0% for low-movers and 26.1% for non-movers. High-movers also had greater odds of spreading rumors or lies about a classmate (AOR = 1.59; CI = 1.28–1.97), with a predicted probability of 28.4%, compared to 25.5% for low-movers and 20.0% for non-movers.

DISCUSSION

There was a high level of residential mobility among this study's sample. Over one in three respondents reported moving in

the past year. These findings exceed recent national estimates, which indicate that 11% of youth move in a given year (U.S. Census Bureau, 2018). The high level of residential mobility may partially reflect contextual elements of the study's urban setting, such as the concentration of renters in urban areas (Joint Center for Housing Studies of Harvard University, 2013), and the dwindling local supply of affordable housing to rent or own (California Housing Partnership Corporation, 2018). The high prevalence of moving observed in this study – especially frequent moving – suggests that educators, especially in urban public school districts, should recognize residential mobility as a potentially common issue among their students, particularly given the associations observed with poor school experiences.

In general, modest dose–response relationships in expected directions were observed between level of residential mobility and a range of negative school experiences. Movers, especially high-movers, had poorer school experiences than non-movers. Previous work has documented the relationship between moving and poor distal academic outcomes, like absenteeism and dropout (Blum, 2005; Voight et al., 2012; Metzger et al., 2015; National Collaborative on Education and Health, 2015). This study augments that work by documenting how more proximal negative school experiences may fit on the pathway linking residential mobility to school failure, in line with this study's theoretical framework (Figure 1). Specifically, the present study provides additional nuance regarding how residential mobility at early ages may relate to negative academic trajectories. Namely, in adjusted models, inverse relationships between residential mobility and school connectedness or caring teachers/staff were only observed for high-movers, contrary to the expectation that this relationship would also be observed among low-movers. Similarly, not all measures of exposure to violence or harassment as a victim exhibited a clear dose–response relationship with residential mobility, whereas this relationship was present for measures of perpetration of school violence or harassment, as well as perceived academic ability. One interpretation is that the act of moving homes may cause stress for young children, or compound stress stemming from other factors. Among low-movers, this stress could manifest as aggressive behavior and a poor perception of one's academic ability, but may not necessarily erode relationships or provoke bullying from other students. Meanwhile, among high-movers, this stress could additionally manifest as low levels of school connectedness and perceived lack of caring teachers/staff, possibly because frequent moving could also mean moving schools, and/or could reflect greater stress occurring in the student's home life.

These findings highlight several opportunities for educators to prevent or intervene on negative academic trajectories by paying closer attention to residential mobility. Recognizing the importance of moving could be beneficial for one simple reason: schools may be alerted that a student has moved, but never be informed of underlying issues. Evidence points to the close relationship between socioeconomic vulnerability (e.g., poverty, structural racism), associated neighborhood and family factors (e.g., caretaker instability, exposure to in-home or neighborhood violence, and poor personal or family health), and both residential mobility and academic success (Figure 1;

Acevedo-Garcia et al., 2008; Jelleyman and Spencer, 2008; Herbers et al., 2012; Perkins, 2017). Tracking residential mobility may be a way to help schools identify students with an elevated risk of experiencing these issues. If caretakers update their address with the school office when a move occurs, schools would know about a student's residential mobility. Many schools already have protocol in place to proactively support students who have changed schools; the present findings indicate that implementing similar mechanisms to identify and engage students who move homes may be a valuable strategy to prevent academic problems. Given inevitable resource constraints, schools may want to prioritize high-movers, or alternately, flag all movers, and monitor for early signs of trouble, including increased perpetration of violence. Finally, even among high-movers, close to four out of five respondents reported feeling that there was an adult at school who cared about them all the time. Interventions designed to support residentially mobile youth could leverage this critical protective factor (National Center on Safe Supportive Learning Environments, 2019) to stabilize school-based relationships and respond to problematic behavior early on, potentially preventing subsequent problems with absenteeism and poor academic performance that can compound over a student's academic life.

Limitations and Next Steps

Despite providing preliminary information to understand the relationship between residential mobility and poor school experiences, this study has several limitations. First, our theoretical framework highlights the complex relationship between socioeconomic and demographic characteristics, neighborhood and family factors, residential mobility, and school experiences. While these factors are heavily intertwined (Eisenberg et al., 2003; Carbone-Lopez et al., 2010; Morrissey et al., 2013; Voight et al., 2015), only some of these variables could be controlled for in the current analysis (because they were present in the dataset). Notably, although this study's descriptive analysis of district characteristics suggests that districts in the analysis had a generally comparable socioeconomic and demographic profile to that of other districts in Los Angeles County, it was not possible to control for these factors at the student-level. Furthermore, the study could not differentiate between students who moved homes and those who moved both homes and schools (recent estimates suggest an approximate 40% overlap between these groups) (Voight et al., 2012, 2017). Second, the sequencing of the home move relative to the school experiences analyzed here is not understood. For example, it was not known whether a mover who reported having been hit or pushed experienced this victimization before or after their move. Relatedly, the CHKS is typically administered in the fall or spring; questions that ask students to report on “past year” incidents may have been interpreted by students to refer either to the last 12 months, or the previous academic year. Third, because the data were obtained from a cross-sectional survey, determining the direction of relationships between variables under study was not possible (Gasper et al., 2010). Fourth, not all districts in Los Angeles County

completed the elementary CHKS in the study year and not all districts in the sample collected data from 100% of students; little information is available to indicate if schools followed sampling guidance, although WestEd's standards for minimally acceptable response rates were incorporated into inclusion criteria for this study's analysis sample. While the sample size was large, the results may not be generalizable to other communities and contexts; caution is especially warranted when interpreting findings outside of the United States. Fifth, all variables were measured via student self-report, and therefore may be susceptible to recall and social desirability bias.

Additional research is needed to better characterize the relationship between residential mobility and its influence on negative academic trajectories, including potential intermediate outcomes like school disconnectedness and absenteeism. First, there is a need for studies of elementary school students that include relevant student-level characteristics not available in the present analysis, such as (but not limited to) race/ethnicity, a measure of household income, and school mobility (Garboden et al., 2017). Second, more longitudinal studies on this topic are needed to determine the sequencing of the residential move(s) relative to the negative school experiences, and to identify potential cumulative effects and analyze causal associations. Third, mixed methods studies or qualitative methods are needed to confirm or contrast patterns observed in the present analysis; interviews with students or teachers/staff could provide rich context to quantitative findings. A more robust understanding of the relationship between residential mobility and school experiences can help schools design and evaluate strategies to identify and support mobile students, potentially providing a valuable lever to prevent or interrupt the pathway toward school disconnectedness, absenteeism, and academic failure.

DATA AVAILABILITY STATEMENT

The individual student-level dataset analyzed in this study was purchased from WestEd. Per the memorandum

of understanding in connection with this dataset, the authors are not permitted to share this dataset. Requests to access the dataset should be directed to WestEd.

ETHICS STATEMENT

The study was deemed exempt from review by the Institutional Review Board of the Los Angeles County Department of Public Health. Written informed consent to participate in data collection for this study was provided by the participants' legal guardian/next of kin.

AUTHOR CONTRIBUTIONS

GG and AD contributed to the design of the study and wrote the sections of the manuscript. With contributions from AD, GG cleaned the dataset, performed the statistical analysis, and interpreted the results. GG, AD, and TK contributed to the manuscript revision, and read and approved the submitted version of the manuscript.

ACKNOWLEDGMENTS

The data used in this study were part of a prior project funded by the Centers for Disease Control and Prevention (U58DP003631). However, the present analysis was not a deliverable of this project but benefited from having access to the California Healthy Kids Survey dataset. Additionally, the Population Health Program at the UCLA Clinical and Translational Science Institute provided support for the writing of this article (TK's time). The authors thank T. J. McCarthy (University of Southern California) for his early contributions to the data analysis component of this project.

REFERENCES

- Acevedo-Garcia, D., Osypuk, T. L., McArdle, N., and Williams, D. R. (2008). Toward a policy-relevant analysis of geographic and racial/ethnic disparities in child health. *Health Aff.* 27, 321–333. doi: 10.1377/hlthaff.27.2.321
- Adams, J. M. (2013). *New Focus on School Climate in mAssive Student Survey*. Available at: <https://edsources.org/2013/revised-student-survey-reflects-focus-on-school-climate/39243> (accessed June 18, 2019).
- Amaral, G., Geierstanger, S., Soleimanpour, S., and Brindis, C. (2011). Mental health characteristics and health-seeking behaviors of adolescent school-based health center users and nonusers. *J. Sch. Health* 81, 138–145. doi: 10.1111/j.1746-1561.2010.00572.x
- Anderson, S., Leventhal, T., Newman, S., and Dupéré, V. (2014). Residential mobility among children: a framework for child and family policy. *Citiescape* 16, 5–36.
- Armstrong, K. E., Bush, H. M., and Jones, J. (2010). Television and video game viewing and its association with substance use by Kentucky elementary school students, 2006. *Public Health Rep.* 125, 433–440. doi: 10.1177/003335491012500312
- Ashley, K. M., Ennis, L. S., and Owusu-Ansah, A. (2012). An exploration of middle school students' perceptions of personal adolescent wellness and their connectedness to school. *Int. J. Soc. Sci. Educ.* 2, 74–89.
- Astone, N. M., and McLanahan, S. S. (1994). Family structure, residential mobility, and school dropout: a research note. *Demography* 31, 575–584.
- Austin, G. (2013). *The California Healthy Kids Survey: The Case for Continuation*. Available at: <https://data.calschls.org/resources/PreventionTactics.pdf> (accessed June 18, 2019).
- Austin, G., Bates, S., and Duerr, M. (2013). *Guidebook to the California Healthy Kids Survey: Part II Survey Content Core Module*. Available at: https://data.calschls.org/resources/chks_guidebook_2_coremodules.pdf (accessed June 18, 2019).
- Beck, B., Buttaro, A. Jr., and Lennon, M. C. (2016). Home moves and child wellbeing in the first five years of life in the United States. *Longit. Life Course Stud.* 7, 240–264.
- Blum, R. W. (2005). A case for school connectedness. *Adolesc. Learner* 62, 16–20.

- Bostean, G., Trinidad, D. R., and McCarthy, W. J. (2015). E-cigarette use among never-smoking California students. *Am. J. Public Health* 105, 2423–2425. doi: 10.2105/AJPH.2015.302899
- California Department of Education (2019). *Safe and Supportive Schools*. Available at: <https://www.cde.ca.gov/ls/ss/se/safesupportive.asp> (accessed June 18, 2019).
- California Healthy Kids Survey (2019). *California School Climate, Health, and Learning Surveys*. Available at: <http://chks.wested.org> (accessed June 18, 2019).
- California Housing Partnership Corporation (2018). *Los Angeles County Annual Affordable Housing Outcomes Report*. Available at: <https://1p08d91kd0c03rlxhmtydpr-wpengine.netdna-ssl.com/wp-content/uploads/2018/06/Full-LA-County-Outcomes-Report-with-Appendices.pdf> (accessed June 18, 2019).
- Carbone-Lopez, K., Finn-Aage, E., and Brick, B. T. (2010). Correlates and consequences of peer victimization: gender differences in direct and indirect forms of bullying. *Youth Violence Juv Justice* 8, 332–350. doi: 10.1177/1541204010362954
- Cederbaum, J. A., Gilreath, T. D., Benbenishty, R., Astor, R. A., Pineda, D., DePedro, K. T., et al. (2014). Well-being and suicidal ideation of secondary school students from military families. *J. Adolesc. Health* 54, 672–677. doi: 10.1016/j.jadohealth.2013.09.006
- Centers for Disease Control and Prevention (2009). *School Connectedness: Strategies for Increasing Protective Factors Among Youth*. Available at: <https://www.cdc.gov/healthyyouth/protective/pdf/connectedness.pdf> (accessed June 18, 2019).
- Centers for Disease Control and Prevention (2018). *School Connectedness*. Available at: https://www.cdc.gov/healthyyouth/protective/school_connectedness.htm (accessed June 18, 2019).
- Child and Family Research Partnership (2017). *5 Things you Should Know About Military-Connected Youth*. Available at: https://childandfamilyresearch.utexas.edu/sites/default/files/201707_5-things_MilitaryYouth.pdf (accessed June 18, 2019).
- Coulton, C., Theodos, B., and Turner, M. A. (2012). Residential mobility and neighborhood change: real neighborhoods under the microscope. *Cityscape* 14, 55–89.
- Davis, A. M., Kreutzer, R., Lipsett, M., King, G., and Shaikh, N. (2006). Asthma prevalence in Hispanic and Asian American ethnic subgroups: results from the California Healthy Kids Survey. *Pediatrics* 118, e363–e370. doi: 10.1542/peds.2005-2687
- Davis, A. M., Lipsett, M., Milet, M., Etherton, M., and Kreutzer, R. (2007). An association between asthma and BMI in adolescents: results from the California Healthy Kids Survey. *J. Asthma* 44, 873–879. doi: 10.1080/02770900701752656
- Department of Education, (2019). *Chronic Absenteeism in the Nation's schools: A Hidden Educational Crisis*. Available at: <https://www2.ed.gov/datastory/chronicabsenteeism.html> (accessed June 18, 2019).
- Dong, M., Ada, R. F., Felitti, V. J., Williamson, D. F., Dube, S. R., Brown, D. W., et al. (2005). Childhood residential mobility and multiple health risks during adolescence and adulthood: the hidden role of adverse childhood experiences. *Arch Pediatr Adolesc Med.* 159, 1104–1110.
- Eisenberg, M. E., Neumark-Sztainer, D., and Perry, C. L. (2003). Peer harassment, school connectedness, and academic achievement. *J. Sch. Health* 73, 311–316. doi: 10.1111/j.1746-1561.2003.tb06588.x
- Ersing, R. L., Sutphen, R. D., and Loeffler, D. N. (2009). Exploring the impact and implications of residential mobility: from the neighborhood to the school. *Advan. Soc. Work* 10, 1–18. doi: 10.18060/77
- Estrada, J. N., Gilreath, T. D., Astor, R. A., and Benbenishty, R. (2013). Gang membership of California middle school students: behaviors and attitudes as mediators of school violence. *Health Educ Res.* 24, 626–639. doi: 10.1093/her/cyt037
- Felix, E. D., Furlong, M. J., and Austin, G. (2009). A cluster analytic investigation of school violence victimization among diverse students. *J. Interpers. Violence* 24, 1673–1695. doi: 10.1177/0886260509331507
- Freudenberg, N., and Ruglis, J. (2007). Reframing school dropout as a public health issue. *Prev. Chronic Dis.* 4, A107.
- Garboden, P. M. E., Leventhal, T., and Newman, S. (2017). Estimating the effects of residential mobility: a methodological note. *J. Soc. Serv. Res.* 43, 246–261. doi: 10.1080/01488376.2017.1282392
- Gaspar, J., DeLuca, S., and Estacion, A. (2010). Coming and going: explaining the effects of residential and school mobility on adolescent delinquency. *Soc. Sci. Res.* 39, 459–476. doi: 10.1016/j.ssresearch.2009.08.009
- Gastic, B. (2008). School truancy and the disciplinary problems of bullying victims. *Educ. Res.* 60, 391–404. doi: 10.1080/00131910802393423
- Gee, K., and Krausen, K. (2015). *Safety Linked to Reduced Truancy in High-Poverty Schools*. Available at: <https://poverty.ucdavis.edu/policy-brief/safety-linked-reduced-truancy-high-poverty-schools> (accessed on June 18, 2019).
- Gilreath, T. D., Astor, R. A., Cederbaum, J. A., Atuel, H., and Benbenishty, R. (2014a). Prevalence and correlates of victimization and weapon carrying among military- and nonmilitary-connected youth in Southern California. *Prev. Med.* 60, 21–26. doi: 10.1016/j.ypmed.2013.12.002
- Gilreath, T. D., Astor, R. A., Estrada, J. N. Jr., Benbenishty, R., and Unger, J. B. (2014b). School victimization and substance use among adolescents in California. *Prev. Sci.* 15, 897–906. doi: 10.1007/s11121-013-0449-8
- Gilreath, T. D., Cederbaum, J. A., Astor, R. A., Benbenishty, R., Pineda, D., and Atuel, H. (2013). Substance use among military-connected youth: the California Healthy Kids Survey. *Am. J. Prev. Med.* 44, 150–153. doi: 10.1016/j.amepre.2012.09.059
- Herbers, J. E., Cutuli, J. J., Supkoff, L. M., Heistad, D., Chan, C.-K., Hinz, E., et al. (2012). Early reading skills and academic achievement trajectories of students facing poverty, homelessness, and high residential mobility. *Educ. Res.* 41, 366–374. doi: 10.3102/0013189x12445320
- Jelleyman, T., and Spencer, N. (2008). Residential mobility in childhood and health outcomes: a systematic review. *J. Epidemiol. Community Health* 62, 584–592. doi: 10.1136/jech.2007.060103
- Joint Center for Housing Studies of Harvard University, (2013). *The State of the Nation's Housing, 2013*. Available at: https://www.jchs.harvard.edu/sites/default/files/son2013_0.pdf (accessed on June 18, 2019).
- Juvonen, J., Wang, Y., and Espinoza, G. (2011). Bullying experiences and compromised academic performance across middle school grades. *J. Early Adolesc.* 31, 152–173. doi: 10.1177/0272431610379415
- Kang, S. (2019). Why low-income households become unstably housed: evidence from the panel study of income dynamics. *Hous Policy Debate* 29, 559–587. doi: 10.1080/10511482.2018.1544161
- Kearney, C. A. (2008). School absenteeism and school refusal behavior in youth: a contemporary review. *Clin. Psychol. Rev.* 28, 451–471. doi: 10.1016/j.cpr.2007.07.012
- Ladd, G. W., Ettekal, I., and Kochenderfer-Ladd, B. (2017). Peer victimization trajectories from kindergarten through high school: differential pathways for children's school engagement and achievement? *J. Educ. Psychol.* 109, 826–841. doi: 10.1037/edu0000177
- Lawrence, E., Root, E. D., and Mollborn, S. (2015). Residential mobility in early childhood: household and neighborhood characteristics of movers and non-movers. *Demogr Res.* 33, 939–950. doi: 10.4054/demres.2015.33.32
- Lenzi, M., Sharkey, J., Vieno, A., Mayworm, A., Dougherty, D., and Nylund-Gibson, K. (2015). Adolescent gang involvement: the role of individual, family, peer, and school factors in a multilevel perspective. *Aggress. Behav.* 41, 386–397. doi: 10.1002/ab.21562
- Lewis, C., Deardorff, J., Lahiff, M., Soleimanpour, S., Sakashita, K., and Brindis, C. D. (2015). High school students' experiences of bullying and victimization and the association with school health center use. *J. Sch. Health* 85, 318–326. doi: 10.1111/josh.12256
- Low, J. A., Hallett, R. E., and Mo, E. (2017). Doubled-up homeless: comparing educational outcomes with low-income students. *Educ. Urban Soc.* 49, 795–813. doi: 10.1177/0013124516659525
- Marsh, H. W., and Martin, A. J. (2011). Academic self-concept and academic achievement: relations and causal ordering. *Br. J. Educ. Psychol.* 81, 59–77. doi: 10.1348/000709910X503501
- Metzger, M. W., Fowler, P. J., Anderson, C. L., and Lindsay, C. A. (2015). Residential mobility during adolescence: do even “upward” moves predict dropout risk? *Soc. Sci. Res.* 53, 218–230. doi: 10.1016/j.ssresearch.2015.05.004
- Mmari, K. N., Bradshaw, C. P., Sudhinaraset, M., and Blum, R. (2010). Exploring the role of social connectedness among military youth: perceptions from youth, parents, and school personnel. *Child Youth Care Forum.* 39, 351–366. doi: 10.1007/s10566-010-9109-3

- Mollborn, S., Lawrence, E., and Root, E. D. (2018). Residential mobility across early childhood and children's kindergarten readiness. *Demography* 55, 485–510. doi: 10.1007/s13524-018-0652-0
- Morrissey, T. W., Hutchison, L., and Winsler, A. (2013). Family income, school attendance, and academic achievement in elementary school. *Dev. Psychol.* 50, 741–753. doi: 10.1037/a0033848
- Murphey, D., Bandy, T., and Moore, K. A. (2012). *Frequent Residential Mobility and Young Children's Well-Being*. Available at: https://www.childtrends.org/wp-content/uploads/2012/01/Child_Trends-2012_02_14_RB_Mobility.pdf (accessed on June 18, 2019).
- National Center on Safe Supportive Learning Environments (2019). *Protective Factors*. Available at: <https://safesupportivelearning.ed.gov/training-technical-assistance/education-level/early-learning/protective-factors> (accessed on June 18, 2019).
- National Collaborative on Education and Health (2015). *Brief on Chronic Absenteeism and School Health*. Available at: <https://www.attendanceworks.org/wp-content/uploads/2017/09/Chronic-Absenteeism-and-School-Health-Brief-1.pdf> (accessed on June 18, 2019).
- National Education Association (2019). *Facts About Child Nutrition*. Available at: <http://www.nea.org/home/39282.htm> (accessed on June 18, 2019).
- O'Malley, M., Voight, A., Renshaw, T. L., and Eklund, K. (2015). School climate, family structure, and academic achievement: a study of moderation effects. *Sch. Psychol. Q.* 30, 142–157. doi: 10.1037/spq0000076
- Perez-Brumer, A., Day, J. K., Russell, S. T., and Hatzenbuehler, M. L. (2017). Prevalence and correlates of suicidal ideation among transgender youth in California: findings from a representative, population-based sample of high school students. *J. Am. Acad. Child Adolesc. Psychiatry* 56, 739–746. doi: 10.1016/j.jaac.2017.06.010
- Perkins, K. L. (2017). Reconsidering residential mobility: differential effects on child wellbeing by race and ethnicity. *Soc. Sci. Res.* 63, 124–137. doi: 10.1016/j.ssresearch.2016.09.024
- Quin, D. (2017). Longitudinal and contextual associations between teacher-student relationships and student engagement: a systematic review. *Rev Educ Res.* 87, 345–387. doi: 10.3102/0034654316669434
- Russell, S. T., Sinclair, K. O., Poteat, P., and Koenig, B. W. (2012). Adolescent health and harassment based on discriminatory bias. *Am. J. Public Health* 102, 493–495. doi: 10.2105/AJPH.2011.300430
- Scanlon, E., and Devine, K. (2001). Residential mobility and youth well-being: research, policy, and practice issues. *J. Soc. Soc. Welfare* 28, 119–139.
- Sheryl, A. H., Stephanie, M. P., Herrenkohl, T. I., Toumbourou, J. W., and Catalano, R. F. (2014). Student and school factors associated with school suspension: a multilevel analysis of students in Victoria, Australia and Washington State, United States. *Child Youth Serv. Rev.* 36, 187–194. doi: 10.1016/j.childyouth.2013.11.022
- Skobba, K., and Goetz, E. G. (2013). Mobility decisions of very low-income households. *Citiescape* 15, 155–171.
- Sparshott, J. (2015). *Rising Rents Outpace Wages in Wide Swaths of the U.S.* Available at: <https://www.wsj.com/articles/rising-rents-outpace-wages-in-wide-swaths-of-the-u-s-1438117026> (accessed on June 18, 2019).
- Spriggs, A. L., Iannotti, R. J., Nansel, T. R., and Haynie, D. L. (2007). Adolescent bullying involvement and perceived family, peer and school relations: commonalities and differences across race/ethnicity. *J. Adolesc. Health* 41, 283–293. doi: 10.1016/j.jadohealth.2007.04.009
- Steiner, R. J., and Rasberry, C. N. (2015). Brief report: associations between in-person and electronic bullying victimization and missing school because of safety concerns among U.S. high school students. *J. Adolesc.* 43, 1–4. doi: 10.1016/j.adolescence.2015.05.005
- Stone, S., Whitaker, K., Anyon, Y., and Shields, J. P. (2013). The relationship between use of school-based health centers and student-reported school assets. *J. Adolesc. Health* 53, 526–532. doi: 10.1016/j.jadohealth.2013.05.011
- Sullivan, K., Capp, G., Gilreath, T. D., Benbenishty, R., Roziner, I., and Astor, R. A. (2015). Substance abuse and other adverse outcomes for military-connected youth in California: results from a large-scale normative population survey. *JAMA Pediatr.* 169, 922–928. doi: 10.1001/jamapediatrics.2015.1413
- Turner, M. A., and Ross, S. L. (2005). “How racial discrimination affects the search for housing,” in *The Geography of (Opportunity): Race and Housing Choice in Metropolitan America*, ed. X. de Souza Briggs, (Washington, DC: Institution Press), 81–100.
- Tyler, J. H., and Lofstrom, M. (2009). Finishing high school: alternative pathways and dropout recovery. *Future Child.* 19, 77–103. doi: 10.1353/foc.0.0019
- U.S. Census Bureau, (2018). *Table 1. General Mobility, by Race and Hispanic Origin and Region, and by Sex, Age, Relationship to Householder, Educational Attainment, Marital Status, Nativity, Tenure, and Poverty Status: 2017 to 2018. Current Population Survey, 2018 Annual Social and Economic Supplement*. Available at: <https://www.census.gov/data/tables/2018/demo/geographic-mobility/-2018.html> (accessed on June 18, 2019).
- U.S. Department of Health and Human Services (2019). *Effects of Bullying*. Available at: <https://www.stopbullying.gov/at-risk/effects/index.html> (accessed on June 18, 2019).
- U.S. Department of Housing and Urban Development (2014). *How Housing Mobility Affects Education Outcomes for Low-Income Children*. Available at: <https://www.huduser.gov/portal/periodicals/em/fall14/highlight2.html> (accessed August 19, 2019).
- Voight, A., Giraldo-Garcia, R., and Shinn, M. (2017). The effects of residential mobility on the education outcomes of urban middle school students and the moderating potential of civic engagement. *Urban Educ.* 1–22.
- Voight, A., Hanson, T., O'Malley, M., and Adekanye, L. (2015). The racial school climate gap: within-school disparities in students' experiences of safety, support, and connectedness. *Am. J. Community Psychol.* 56, 252–267. doi: 10.1007/s10464-015-9751-x
- Voight, A., Shinn, M., and Nation, M. (2012). The longitudinal effects of residential mobility on the academic achievement of urban elementary and middle school students. *Educ. Res.* 41, 385–392. doi: 10.3102/0013189x12442239
- WestEd (2014). *Search LEA Reports*. Available at: <https://calschls.org/reports-data/search-lea-reports/> (accessed on June 18, 2019).
- WestEd (2019). *California Healthy Kids Survey*. Available at: <https://www.wested.org/project/california-healthy-kids-survey-chks/> (accessed on June 18, 2019).
- Wong, M. M., Klinge, R. S., and Price, R. K. (2004). Alcohol, tobacco, and other drug use among Asian American and Pacific Islander Adolescents in California and Hawaii. *Addict. Behav.* 29, 127–141. doi: 10.1016/s0306-4603(03)00079-0
- Woolley, M. E., and Grogan-Kaylor, A. (2006). Protective family factors in the context of neighborhood: PROMOTING positive school outcomes. *Fam Relat.* 55, 93–104. doi: 10.1111/j.1741-3729.2006.00359.x
- Ziol-Guest, K. M., and McKenna, C. C. (2014). Early childhood housing instability and school readiness. *Child Dev.* 85, 103–113. doi: 10.1111/cdev.12105

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2019 Green, DeFosset and Kuo. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



Residential Mobility, Family Structure, and Completion of Upper Secondary Education – A Registry-Based Cohort Study of the Norwegian Adolescent Population

Tommy Haugan^{1*} and Arnhild Myhr^{2,3}

¹ Faculty of Nursing and Health Sciences, Nord University, Levanger, Norway, ² Trøndelag R&D Institute, Steinkjer, Norway,

³ Department of Neuromedicine and Movement Science, Faculty of Medicine and Health Sciences, Norwegian University of Science and Technology, Trondheim, Norway

OPEN ACCESS

Edited by:

David Heyne,
Leiden University, Netherlands

Reviewed by:

Gil Keppens,
Vrije University Brussel, Belgium
Bruce John Tonge,
Monash University, Australia

*Correspondence:

Tommy Haugan
tommy.haugan@nord.no

Specialty section:

This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Psychology

Received: 16 April 2019

Accepted: 27 September 2019

Published: 15 October 2019

Citation:

Haugan T and Myhr A (2019)
Residential Mobility, Family Structure,
and Completion of Upper Secondary
Education – A Registry-Based Cohort
Study of the Norwegian Adolescent
Population. *Front. Psychol.* 10:2311.
doi: 10.3389/fpsyg.2019.02311

Background: Longitudinal studies exploring the complex interplay between family structures and residential mobility on educational achievement and failure are lacking. We investigate the interplay between the number of residential moves during late childhood, parental education level, family living situation, and the probability of completing upper secondary education.

Methodology: Detailed longitudinal data for a random sample of 30% of the entire Norwegian population born 1982 to 1989 ($N = 121,247$) and information on all their relocations between Norwegian enumeration districts from ages 10 to 18 years were extracted from the Norwegian population registries. Family structures were grouped into four intersectional family strata defined by combining categories of parental education level (distinguishing poorly educated and well-educated families) and the family's living situation (comparing non-intact families with intact families). We applied two-level logistic regression models, which incorporated individual and family contextual factors, to estimate possible differences in completion rates of upper secondary education.

Results: Non-completion of secondary education (which constitutes 29% of the study sample) increases incrementally with the number of residential changes across all four family structures, but this effect was not distributed evenly between the different family strata. Individuals in “well-educated, intact families” seem to be least affected by residential moves. On the other hand, the highest disadvantage of frequent moves was among adolescents in the stratum “poorly educated, intact families.” In poorly educated families the probabilities of completing secondary school among non-intact and intact families converge toward each other as the number of moves increase. About 43% of the variation in school completion may be attributed to differences between families. The highest risk of school non-completion was found among adolescents in poorly educated families, which accounted for 74% of the non-completers.

Conclusion: We demonstrated underlying links between residential mobility and family structures on non-completion of upper secondary education. The adverse effect of frequent moves calls for attention in schools, public health agencies, and housing policies. The findings should be considered in a life course perspective, as the accumulation of unfavorable conditions during childhood and adolescence tends to constrict future prospects in terms of health and quality of life.

Keywords: upper secondary education, school completion, educational achievement, residential mobility, adolescence, parental education, family structures, social inequality

INTRODUCTION

Educational inequality, which exists in most wealthy nations, is of global concern (OECD, 2018). Family origin and a family's resources and strategies create a powerful social context that to a large extent predicts educational achievement (Corrás et al., 2017). Factors shown to be associated with youth non-completion of secondary education include low parental socioeconomic status (SES) and family adversity such as parental divorce, household instability, and poverty (Amato, 2001; De Ridder et al., 2013; Myhr et al., 2017). Adolescents who drop out of secondary education are substantially reducing their odds of having long, happy, and healthy lives (Viner et al., 2012). School dropout increases risk of long-term socioeconomic marginalization (Bäckman et al., 2015; OECD, 2018), unemployment (Caspi et al., 1998), dependence on public benefits early in life (De Ridder et al., 2012; Myhr et al., 2018), and mental and physical health problems (Marmot and Bell, 2012; Viner et al., 2012).

Internal migration – changing residence within national borders – is often voluntary but may be born of necessity. Northern and western Europe are characterized by high internal migration (Bell et al., 2015; Bernard, 2017). Various life course events impact residential mobility over the life span (Warner and Sharp, 2016). Young adults and families with children are the most frequent movers (Bell, 1996; Bernard, 2017; Morris et al., 2018), and children from single-parent households are even more likely than children from two-parent families to move (Feijten and Van Ham, 2007; Murphey et al., 2012). Parents may seek to relocate in pursuit of upward social mobility and access to better schools or neighborhoods (DeLuca and Dayton, 2009). Neighborhood and residential contexts affect individuals' cognitive development, health, and educational achievement in heterogeneous ways and life course outcomes related to changes in such contexts may thus be highly individual (Sampson et al., 2002; Sharkey and Faber, 2014). Residential mobility in childhood interacts at the neighborhood, family, and individual levels in cumulative and compounding ways and thereby affect well-being and behavior through adolescence (Jelleyman and Spencer, 2008). Although one may assume both advantages and disadvantages from such transitions, moving itself is a potential source of stress for children, independent of any increase or decrease in residential quality or their origins and destinations (Jackson and Mare, 2009). Emerging research indicates residential mobility has a wide range of potential negative effects on children, including developmental, behavioral, and emotional problems (Oishi and Schimmack, 2010; Fowler et al., 2015; Webb et al., 2016), a higher

risk of substance abuse and violent offending (Haynie and South, 2005; Fowler et al., 2015; Webb et al., 2016), and poor academic achievement (Voight et al., 2012).

However, it is not clear that residential mobility has only negative effects on child development. Methodological issues that produce inaccurate estimates might lead researchers to overestimate the deleterious effects of moving by confounding it with various factors (Garboden et al., 2017). Research that distinguishes the circumstances shaping residential mobility shows that its detrimental effects on children are more likely to emerge when it occurs in difficult circumstances [see, e.g., (Fantuzzo et al., 2004; Hanushek et al., 2004)], and could also be beneficial to health over the longer term (Morris et al., 2018). A 10-year follow-up study in the United States found a negative association between the number of childhood residential moves and well-being as adults among introverts but not among extraverts (Oishi and Schimmack, 2010). The authors suggest that residential moves can be a risk factor for introverts and that extraversion can be an interpersonal resource for social relationships and well-being in mobile societies. Some studies isolate the issue of family structure, finding that the presence of both (biological) parents prevents harm through frequent moving, while frequent movement among children of single or remarried parents may result in adverse school performance (Tucker et al., 1998; Scanlon and Devine, 2001). The combination of both school and family transitions might increase children's risk of social withdrawal and isolation (Dupere et al., 2015). Likewise, adolescents who change both addresses and schools are often more likely to drop out of school, an effect that may function through disruptions in peer networks (South et al., 2007). Thus, the possible influence of household change and family SES should be accounted for when isolating the effects of residential instability for children and youth. The structural amplification theory states that unfavorable "social conditions decrease the likelihood of attaining personal resources that otherwise would moderate undesirable consequences" (Ross and Mirowsky, 2011). From such a perspective, residential mobility during adolescence might make it harder while residential stability might make it easier to attain personal resources (such as social networks) that counteract unfavorable family conditions.

Important questions regarding the complex interplay between family resources and residential mobility on school achievement and failure still remain unanswered. More social epidemiological studies where the diversity of human population movement are not reduced to a simple dichotomy (moved or not moved) during childhood and adolescence are needed. Longitudinal

studies accounting for the number of residential moves while growing up may provide a more comprehensive picture of how family resources and strategies shape educational inequalities. In the present study, we explore the interplay between number of residential moves during late childhood, parental education level, family living situation, and the probability of completing upper secondary education. We hypothesize that level of parental education and family living situation condition the association between residential mobility and school completion.

MATERIALS AND METHODS

Data Sources

This study is based on national administrative data from Statistics Norway's event database, FD-trygd (Akselsen et al., 2007) and the Norwegian National Education Database (NUDB; StatisticsNorway, 2001) during the period 1992 to 2010. The FD-Trygd database assembles event registration data for all Norwegian citizens from several official administrative and statistical registers and includes life cycle events and demography, work status, income, and national insurance status. We extracted a random sample of 30% ($N = 161,743$) of all Norwegians aged 21 to 27 years in 2010 (i.e., born in the period 1982 to 1989), stratified by age, gender, and municipality of residence. This cohort gave us long enough follow-up periods to predict the effect of residential mobility during childhood and adolescence (from age 10 until age 18) on completion of upper secondary education. This dataset is linked to the NUDB database by using the unique 11-digit personal identification numbers assigned to all Norwegian citizens. Through a unique family identification code attached to each personal identification number, we were also able to allocate information on the parents and the household to each individual. This enabled us to map the parental education level and to determine whether the individual lived with his or her parents. Hence, we ended up with linked longitudinal data for both subjects and their parents, including annual updates on residential identifiers, parental education level, social and financial insurance status, and the family's living situation. From the 161,743 individuals initially included in the dataset, we excluded 13,745 individuals (7.5%) from the sample due to missing their educational data at age 21. In addition, 2,523 individuals were excluded due to unknown parental identity and 24,228 individuals due to missing residential identifiers during the follow-up period. A large majority, 97%, of these excluded individuals immigrated to Norway during the study's follow-up period (i.e., 1992–2010). Thus, to ensure equal observation time (i.e., from age 10 until age 18) for all subjects in the study sample, these individuals were excluded from the study. The final dataset contained 121,247 individuals.

Assessment of Variables

Several social dimensions influence educational achievement and may contribute to generate educational inequalities (Støren and Helland, 2009; Bäckman and Nilsson, 2010; Myhr et al., 2017). We have selected the following demographic and socioeconomic determinants to evaluate their effects on the probability of

completing secondary education among the Norwegian youth population.

Individual Level

Non-completion of Secondary Education

The binary dependent variable is whether (or not) the individual completed upper secondary education by age 21, obtained from the NUDB database. In Norway, where education is by and large public, young people generally begin upper secondary education at age 16, and it consists primarily of a high school academic track of 3 years and/or vocational education, which lasts between 2 and 4 years (Ministry of Education and Research, 2007). We examined completion rates 5 years later, i.e., at age 21. The completion rate for upper secondary education in Norway has remained stable at around 70% since the country's major education reform in 1994, with slightly higher completion rates in recent years (StatisticsNorway, 2018).

Gender

We categorized gender as male or female and used male as the reference category.

Residential Mobility

Residential mobility was measured as the number of moves between Norwegian neighborhoods while the children were between the ages of 10 and 18 years. For each follow-up year only one move was counted, which means that the maximum possible number of residential moves during the observational period was nine. We used the individual's recorded census enumeration district, which is the lowest geographical level for Norwegian population statistics, to identify their neighborhoods (Akselsen et al., 2007).

Family Level

The unit of analysis at the second level is the families ($N = 110,865$) identified in the study sample. Unique family identifiers enable us to identify siblings in our 30% random study sample who shared the same mother and father as well as to link information on children to that of their mother and father.

Parental Education Level

Parental education level, obtained from the NUDB database, was based on the Norwegian standard classification of education (StatisticsNorway, 2001), providing nine levels which were collapsed into two education level groups: (i) both parents completed upper secondary or tertiary education, termed as "well-educated"; and (ii) neither or only one parent completed upper secondary education, termed as "poorly educated."

Family Living Situation

The individual's living situation was grouped into one of two categories, defined as (i) "intact family": living with two registered parents at both age 10 and age 16; or (ii) "non-intact family": living with only one (or no) parent at age 16.

Family Structure

In order to consider simultaneously multiple axes of inequality we created four intersectional strata, corresponding to

combinations of parental education level (two categories) and family living situation (two categories). The intersectional strata, referred to as “family structure,” were divided into the following categories: (i) “well- educated intact family,” (ii) “well-educated non-intact family,” (iii) “poorly educated intact family,” and (iv) “poorly educated non-intact family.”

Family Poverty

The dichotomous variable “family poverty” was defined as having parents receiving social security benefits in the period from 10 to 16 years of age (according to the indexed person’s age).

Statistical Methods

We investigate the relationship between completion of secondary education and number of residential moves during late childhood and test the hypothetical interaction with family structure by using two-level logistic regression analysis. The data have a two-level hierarchical structure with individuals (Level 1, $n = 121,247$) nested within families (Level 2, $n = 110,865$). The family context may condition individual level variation in completion of upper secondary education due to unmeasured factors. We therefore fitted a two-level random intercept model (Goldstein, 1995; Rabe-Hesketh and Skrondal, 2012; Snijders and Bosker, 2012) to distinguish the individual and family sources of variation in the outcome.

We modeled the prediction of school completion in five steps. First, we estimated an “empty” model, which includes only a random intercept, representing the variation in school completion between the two initial levels. This allowed us to determine the impact of the family context on the outcome (Merlo et al., 2005). Model 2 (in **Table 2**) includes gender and residential mobility variables. In Model 3, we adjust for the family predictors (i.e., family structure and poverty). Model 4 adds the interaction terms residential mobility and family structure. To estimate the family level variance we need to have multiple children per family (Rasbash et al., 2010). Since most individuals in the present study were in family groups of only one child, the variance at the family level for these individuals included the individual variance. To account for this in the analysis, we also estimated the family variance only for those families in the study sample with more than one child (Rasbash et al., 2010; Dundas et al., 2014). Finally, in **Table 3**, the random intercept logit model was extended for the relationship between residential mobility and school completion to allow residential mobility effect to vary across families. We fitted a two-level random slope model (i.e., individuals nested within families) in order to examine whether the relationship between residential mobility and school completion varies between families. We used a likelihood ratio test (LR test) to compare the random intercept and the random slope model’s goodness of fit (Rabe-Hesketh and Skrondal, 2012).

Estimates for fixed effects are reported as odds ratios (OR) with 95% confidence intervals (CI). The relative importance of the general family contextual effects is assessed by the variance (on the log odds scale) with 95% CI and the intra-class correlation coefficients (ICCs; Snijders and Bosker, 2012). The ICC measures the correlation in the outcome of “school completion” between two individuals randomly selected from

the same family. The larger the ICC, the stronger the clustering in school completion within the family and the larger the general family contextual effects. The multilevel regression model parameters were estimated by using the mixed effects method using STATA/MP software (version 13).

Ethics Statement

Statistics Norway constructed the study sample with linked longitudinal data for both the subjects and their parents, by means of record linkage of different registries integrated into the Statistics Norway database by using the unique Norwegian personal identification number. Finally, Statistics Norway delivered the data to us without personal identification numbers to ensure the anonymity of the study subjects. The study and the data linkage procedures were approved by the Regional Committee for Medical and Health Research Ethics of Mid-Norway (permission 2011/783).

RESULTS

Descriptive Statistics

Table 1 presents descriptive information for the children and their parents among completers and non-completers of upper secondary education. Non-completers comprised 29% of the sample, which is in accordance with Norwegian official statistics (Chaudhary, 2011). In this study population, the highest absolute number of individuals belong to the family structure stratum “poorly educated intact family,” where we also identified the highest absolute number of non-completers.

In total, 53% of non-completers and 70% of the school completers had never moved their official residence when they were 10 to 18 years old. In total, 32% of the adolescents in the study population moved to another neighborhood in one to three of the nine observational years, and about 3% moved in four or more. The mean number of years with move in the observational period for the non-completers was almost one, which is almost twice the mean number for completers (see **Table 1**).

The Impact of Childhood Residential Mobility, Family Structure, and Their Interactions on the Completion of Secondary Education

The prevalence of school dropout at the family level differs. Keeping only the second random intercept in the model (Model 1 in **Table 2**), we found that the ICC is 0.43. In other words, the empty model suggests that about 43% of the variation in school completion could be attributed to differences between families. Models 2 and 3 in **Table 2** display the observational associations with school completion and residential mobility (Model 2), adjusted for family structure, and poverty during childhood (Model 3). The highest risk of school non-completion was found within poorly educated families. Having a non-intact family was also shown to be a potent risk factor. However, adolescents living in poorly educated but intact families have overall lower odds for school completion than their counterparts living in

TABLE 1 | Characteristics of children and their parents by whether or not the children completed upper secondary education by age 21.

Variable	Non-completers (<i>N</i> = 35,254, 29.1%)		Completers (<i>N</i> = 85,993, 70.9%)	
	<i>N</i>	%	<i>N</i>	%
Individual level variables				
Female	14,504 ^a	41.1	44,630	51.9
Years with residential mobility 10–18 years (mean, SD)	0.917 ^b	1.279	0.475	0.878
Residential mobility (categorical)				
Never moved at age 10–18 years	18,767 ^a	53.2	60,012	65.0
1 year with move	7,833 ^a	22.2	16,257	19.9
2–3 years with move	6,744 ^a	19.1	8,491	12.6
≥4 years with move	1,910 ^a	5.4	1,233	1.4
Family level variables				
Family structure				
Well-educated intact family	5,287 ^a	15.00	31,194	36.28
Well-educated non-intact family	3,740 ^a	10.61	8,623	10.03
Poorly educated intact family	14,027 ^a	39.79	34,206	39.78
Poorly educated non-intact family	12,200 ^a	34.61	11,970	13.92
Family poverty	10,424 ^a	29.57	8,490	9.87
Father's identity unknown	676 ^a	1.92	694	0.81

^aSignificant difference (p -value ≤ 0.05) between groups tested by chi square test. ^bSignificant mean difference (p -value ≤ 0.05) between groups tested by independent sample t -test.

well-educated but non-intact families. Anyway, adolescents with poorly educated non-intact families struggled the most with school completion. The odds of school completion is about 80% lower for this group compared to well-educated intact families. Moreover, females had almost twice as high a likelihood to complete upper secondary school compared to males, while family poverty was estimated to increase the risk of school dropout by 63%.

In **Table 3**, we extended the random intercept logit model to examine whether there are differences between families in the relationship between residential mobility and probability of completing upper secondary school. The two-level random intercept model, which is nested in the random slope model, is rejected at the 5% significance level (using a likelihood ratio test), suggesting that the impact of residential mobility on school completion does vary between families.

Children whose families did not move and who lived in a well-educated intact family had a 89% chance of completing upper secondary school, compared to 81, 76, and 64% for residential stayers who were living in a well-educated non-intact family, a poorly educated intact family, and a poorly educated non-intact family, respectively. **Figure 1** shows that the predicted probability of school completion decreases incrementally with the number of years with residential moves. In general, for every additional year with a residential move the probability of school completion decreased by 26%. However, well-educated intact families seem to be least affected by residential moves, and among children in poorly educated intact families the adverse effect of moves is significantly steeper than for the other three family structures

(**Figure 1**). For movers who changed residential household in three out of the nine follow-up years, for example, the predictive probability of school completion was 81% in a well-educated intact family, 68% in a well-educated non-intact family, 56% in a poorly educated intact family, and 48% in a poorly educated non-intact family.

In poorly educated families the probabilities of school completion within non-intact and intact families converge toward each other as the number of moves increase. This result was not evident among well-educated families, and in fact they seem to grew more distinct.

For frequent movers the negative impact of a non-intact family situation on school completion appeared to be most evident among well-educated families, whereas among non-movers the adverse impact of non-intact families was most prominent among poorly educated families (see **Figure 1**).

DISCUSSION

This registry-based cohort study reinforces the relevance of the family context and the complex interplay between family structures and residential mobility on the probability of completing upper secondary education. Our parametric estimations indicate that the risk of school non-completion increases for each additional year with residential move during the period from 10 to 18 years of age. The negative impact of frequent residential mobility in school completion differs, however, depending on the family's structure, as measured by parental education level and family living situation. Our two-level model estimated that about 43% of the variation in school completion can be attributed to the differences between families. Considering the significant impact of family belonging, it is essential to uncover the risk factors at the family level and their moderators. Among those who did not complete upper secondary education (about 29% of the study sample), 74% have poorly educated parents, which is in line with other Norwegian intergenerational studies (De Ridder et al., 2013; Myhr et al., 2017).

The impact of coming from a non-intact family affected children's likelihood of completing school – although not as much as the parental education level. In our study sample, three out of 10 adolescents were living with only one parent at age 16, which accounted for about 45% of the school non-completers. Previous studies have shown that adolescents not living with both parents are less well-adjusted psychologically and socially; they are exposed to a lower family income and they have lower academic achievement, relative to adolescents from intact families (Amato, 2001; Seijo et al., 2016). The explanation as to why negative outcomes are most common among children in single-parent families might be due to both a selection process (i.e., pre-existing differences) and a causal relationship (i.e., negative effects are the consequence of parental separation) (Seijo et al., 2016). Whatever the underlying cause, these negative outcomes are concerning because the proportion of children and adolescents living in single-parent families, particularly in Western countries, is growing (Child Trends, 2015).

TABLE 2 | The impact of residential mobility and its interaction with family structure (education level and family living situation) on the probability of completing upper secondary education.

	Model 1		Model 2		Model 3		Model 4	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Fixed effects								
Female			1.884	1.81–1.96	1.857	1.79–1.93	1.857	1.79–1.93
Frequency of household mobility			0.584	0.57–0.60	0.778	0.76–0.79	0.794	0.76–0.83
Family structure								
Poorly educated non-intact family					Ref		Ref	
Poorly educated intact family					1.742	1.66–1.83	1.838	1.73–1.95
Well-educated non-intact family					2.431	2.28–2.60	2.496	2.29–2.73
Well-educated intact family					4.965	4.64–5.32	5.091	4.72–5.50
Family poverty					0.371	0.35–0.39	0.372	0.35–0.39
Father's identity unknown					0.654	0.56–0.76	0.653	0.56–0.76
Interaction family structure and residential mobility								
Poorly educated non-intact family							Ref	
Poorly educated intact family							0.919	0.88–0.96
Well-educated non-intact family							0.981	0.94–1.03
Well-educated intact family							0.996	0.94–1.05
Random effects								
Family variance (95% CI)	2.571	2.2–2.88	2.207	1.95–2.50	1.520	1.31–1.76	1.519	1.31–1.76
ICC (%)	43.87		40.16		31.60		31.59	
–2log likelihood		145621.8		140199.6		132123.0		132106.0
Family variance > 1 child								
Family variance (95% CI)	2.521	2.24–2.84	2.187	1.93–2.48	1.495	1.28–1.74	1.496	1.29–1.74
ICC (%)	43.39		39.93		31.25		31.25	
–2loglikelihood		46817.0		45441.3		42725.1		42701.0

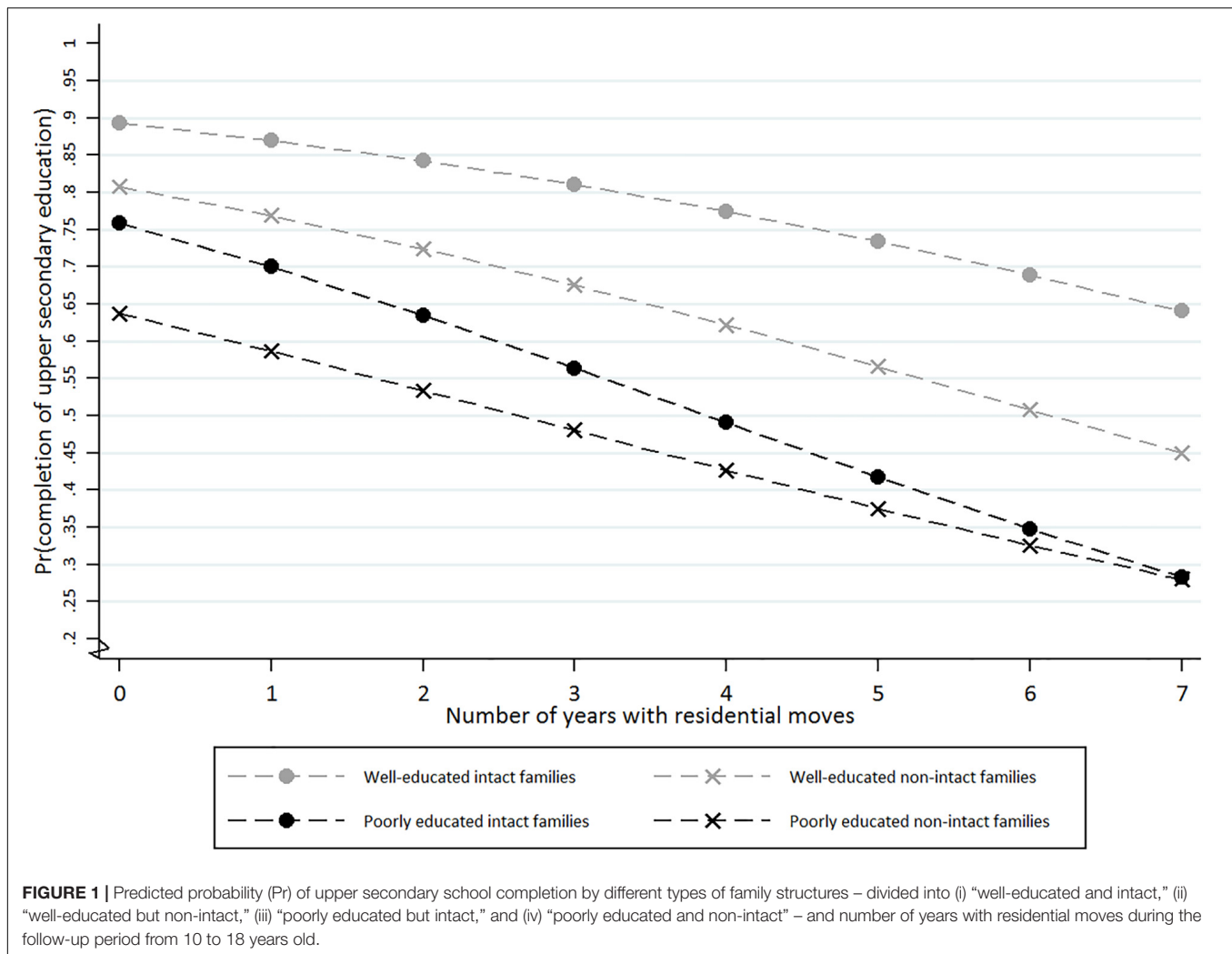
At the same time, our study suggests that residential stability can at least partially compensate for the negative impact of family disruption and low parental education level. Our findings conform to others that show links between number of total moves and adverse outcomes in health and well-being through maturity and later in life (Webb et al., 2016; Morris et al., 2018). That is, they show elevated risks across the socioeconomic spectrum

(Webb et al., 2016). In our study, 47% of the participants had one or more years with residential moves between the ages of 10 and 18 years. The risk of non-completion of secondary school increased incrementally with the number of residential changes across all family structures. In other words, each additional residential move between ages 10 to 18 years lowered the likelihood of upper secondary school completion. But this effect was not distributed evenly between the different family strata, in a dose-response fashion. The well-educated intact families seem to be least affected by residential moves, where even frequent movers had a high predictive probability of school completion. This observed trend is in line with the idea behind the resource substitution and structural amplification theory in the sense that residential stability is to a certain extent most valuable among adolescents living in family structures that can be unfavorable. Residential mobility may cause unstable social conditions during childhood and adolescence and decrease the likelihood of attaining personal resources, such as social networks and long lasting friendships, that otherwise would moderate undesirable family conditions related to poorly educated parents and/or family disruption. Children are vulnerable to damaged networks and environments as a result of residential relocations (Morris et al., 2018). Residential mobility may threaten child development through mechanisms such as changes in school and peer networks (Coulton et al., 2007). Household moves may also disrupt connections with parents and extended family. Well-educated, intact families have higher

TABLE 3 | Parameter estimates and log-likelihood values for the random intercept and random slope logistic regression models.

Parameter	Random intercept		Random slope (coefficient)	
	Coef	SE	Coef	SE
Individual level				
Intercept	1.5761	1.53–1.62	1.5729	1.52–1.62
Residential mobility	–0.5233	–0.55 to –0.50	–0.5334	–0.56 to –0.51
Family level random part				
Residual variance	2.1392	1.89–2.42	2.0617	1.81–2.35
Residual variance slope			0.1032	0.06–0.19
–2Log likelihood		141505.4		141488.7
BIC		141540.5		141535.5
AIC		141511.4		141496.6

Likelihood ratio test: LR chi2 = 16.77, p-value < 0.0001.



social and socioeconomic resources that might prevent loss of the children’s social capital upon residential relocation, thereby minimizing the unfavorable consequences of household moves (Hagan et al., 1996).

However, the underlying links between residential mobility and family structures on non-completion of upper secondary education are intricate and can be difficult to fit into overall education and health mobility (sociological and psychological) theories and models. We found that adolescents living in poorly educated, intact families showed the most significant disadvantage of household moves. Among children of poorly educated families, the likelihood of upper secondary school completion within intact and non-intact families converge toward each other as the residential moves increase. This finding is puzzling given previous studies suggesting that frequent residential moves are a marker for family dysfunctional and chaotic households (Boynton-Jarrett et al., 2013). We would therefore expect that the non-intact families experience the greatest challenges with residential mobility, regardless of education level. However, it might be that residential moves within intact, poorly educated families are more often related

to adverse circumstances such as economic difficulties and work situation than the nature of mobility among other family structures. Additionally, residential mobility may indicate that adolescents living in poorly educated, non-intact families have less social capital to lose by residential relocations and more often, and to a greater extent, a relocation actually represents an opportunity to restart one’s social network and environmental adaptation. A life course approach should be adopted given the time lag between household mobility during childhood and outcomes related to education and health. To offer more conceptual understanding of residential mobility, Morris et al. (2018, p. 123) stated that “a greater focus on mobility as a biography that is taken into account alongside other life events will permit a “bigger picture” view of mobility.”

Overall, the present study conforms with past research showing that residential mobility is a crucial factor in determining educational inequalities (Haelermans and De Witte, 2015). Frequent moves may accumulate unfavorable personal and social conditions that make it more difficult to attain personal resources necessary to complete upper secondary education

(South et al., 2007; Metzger et al., 2015). Associations between residential mobility and problem behaviors could, however, be driven by school mobility and not necessarily the move itself (Gasper et al., 2012). Nevertheless, children have little influence over mobility decisions, which may imperil their existing social networks. Residential moves require, in many cases, children to change schools. Our study's definition of moves makes changing school nearly certain, although upper secondary school affiliation may be the least likely to change as a result of such moves. The impact of switching schools on dropout varies depending on a youth's initial risk for switching schools (Gasper et al., 2012). To the extent that our study addresses moves that lead to changing schools, it must be taken into consideration when the findings are to be interpreted.

The notation that non-completion of secondary education increases incrementally with the number of residential changes during childhood could be considered in light of basic psychological needs. Relationships and a sense of connectedness play a critical role in promoting well-being in the context of schools (Graham et al., 2016). The desire for interpersonal attachments – the need to belong – is considered a fundamental human motivation and a basic psychological need (Baumeister and Leary, 1995). Baumeister and Leary (1995) propose that human beings need a few close relationships, and we need these interactions to occur in a framework of long-term, stable caring and concern, and when the need for belonging is satisfied, positive social, behavioral, and psychological outcomes can be achieved. The authors also state that forming additional bonds beyond those few persons has less and less impact on emotional and cognitive outcomes. However, Bronfenbrenner's ecological theory of human development and socialization – also called the bioecological systems theory – suggests a broader framework by underlining the influence of different levels and sizes of social and cultural environments on human development (Bronfenbrenner, 1979; Bronfenbrenner and Morris, 2006). When a child experiences a residential move, many of the child's closest surroundings and nearest relationships, like teachers and classmates at school, hobby club mates, the neighbors and the connections between the settings are interrupted, and new relationships need to be built up. Consequently, these children are exposed to a socially vulnerable situation. Thus, initiatives that promote social inclusion in the school, but also in other “microsystem” arenas, such as family, neighborhood, peers, and sport clubs, are important to prevent loss of social capital when adolescents change residence.

In a recent methodological review of the residential mobility literature, the concept of mobility is inconsistently operationalized along four dimensions: school vs. residential, distance, timing, and frequency (Garboden et al., 2017). The authors therefore call for an ideal mobility module that collects “full residential and school trajectories of children, including any instigating events and contemporaneous changes in family structure” (Garboden et al., 2017, p. 258). Given that we were not able to do this, the current study has several limitations and the findings are vulnerable to selection bias. A major

limitation is the lack of information about the reasons for residential mobility decisions. We did not take into account ethnic background or separate the educational levels of mother and father. A previous study from Norway found that ethnic majority students benefit the most from having parents with high education, and further that minority girls largely benefit from their mother's education level (Støren and Helland, 2009). Further studies with specific analyses that reveal interaction effects are needed to give a more nuanced explanation of the complexity between individual characteristics, family background, resources and living arrangements, and school completion. Regarding measure of family SES, there are several other indicators than parental education level that can be used such as family income, professional status, parental financial wealth, and receipt of social security benefits. Moreover, an ideal mobility study includes explanatory variables at multiple appropriate levels and allows the levels (e.g., the context) to change over time. A highly relevant level in the present study is the school or schools the children attended during the follow-up period. Thus, it would be beneficial to analyze the data by multiple membership cross-classified multilevel models that allow the neighborhood, school, and family levels to change over time (Chandola et al., 2005; Chung and Beretvas, 2012; Leckie, 2013).

Resource substitution theory of education and health outcomes later in life suggests that persons with disadvantaged family backgrounds benefit the most from educational attainment (Ross and Mirowsky, 2011; Schaan, 2014). Thus, the variation in school completion between family structures (in our study defined by parental educational level and residing with one or both parents) plays an important role in public health efforts. Further research in this area should emphasize the underlying interplay between residential mobility and family resources on non-completion of upper secondary education. In our study, a high proportion of non-completers live with poorly educated parents. This is in accordance with other studies showing that parental educational attainment, to a large extent, structures the education level of their offspring. Thus, future public health efforts should promote intergenerational educational mobility. The adverse effect of frequent moves, particularly among adolescents in poorly educated families, calls for attention in schools, family, public health agencies, and housing policies to promote stability and sustainable life situations among vulnerable families. Adolescents in poorly educated and non-intact families are particularly at risk for school non-completion and should therefore be given priority in future efforts to increase completion rates. Various stakeholders have to communicate and collaborate in their recognition of the importance of psychological membership and the concept of belonging. The stakeholders should build productive relationships on multiple levels of practice to support children with social, emotional, and behavioral difficulties in school contexts (Botha and Kourkoutas, 2016). Our findings should be considered in a life course perspective, because accumulation of unfavorable conditions during childhood and adolescence tend to constrict future prospects in terms of health and quality of life.

DATA AVAILABILITY STATEMENT

Due to the legislation governing scientific ethics, the data that support the findings of this study are only available on request in accordance with the agreement with the owner of the data, Statistic Norway, and the approver of the study, the Regional Committees for Medical and Health Research Ethics (REC) in Mid-Norway. Please see <http://www.ssb.no/en/omssb/tjenester-og-verktoy/data-til-forskning> for the procedure and requirements to obtain microdata from Statistic Norway.

ETHICS STATEMENT

The present study is based on retrospective analysis of registry data. The Regional Committees for Medical and Health Research Ethics (REK) of Mid-Norway approved the study and the data linkage procedures (permission 2011/783). The ethic committee REK formally waived the need for consent. The exemptions were given because our study used data registries where

the information was collected from sources other than the persons themselves.

AUTHOR CONTRIBUTIONS

TH and AM designed and planned the study, and interpreted the results. AM structured and analyzed the data, and assisted with writing and editing of the manuscript. TH had primary responsibility for the writing and editing of the manuscript. Both authors took responsibility for the integrity and accuracy of the data analysis and the decision to submit this manuscript for publication, and read and approved the final manuscript.

FUNDING

Funding for open access publication fees was received from the Faculty of Nursing and Health Sciences at Nord University.

REFERENCES

- Akselsen, A., Lien, S., and Siverstol, Ø. (2007). *FD-Trygd, List of Variables*. Oslo: Statistisk Sentralbyrå.
- Amato, P. R. (2001). Children of divorce in the 1990s: an update of the amato and keith (1991) meta-analysis. *J. Fam. Psychol.* 15, 355–370. doi: 10.1037//0893-3200.15.3.355
- Bäckman, O., Jakobsen, V., Lorentzen, T., Österbacka, E., and Dahl, E. (2015). Early school leaving in scandinavia: extent and labour market effects. *J. Eur. Soc. Policy* 25, 253–269. doi: 10.1177/0958928715588702
- Bäckman, O., and Nilsson, A. (2010). Pathways to social exclusion—a life-course study. *Eur. Sociol. Rev.* 27, 107–123. doi: 10.1093/esr/jcp064
- Baumeister, R. F., and Leary, M. R. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychol. Bull.* 117, 497–529.
- Bell, M. (1996). How often do Australians move? Alternative measures of population mobility. *J. Aust. Popul. Assoc.* 13, 101–124. doi: 10.1007/bf03029490
- Bell, M., Charles-Edwards, E., Kupiszewska, D., Kupiszewski, M., Stillwell, J., and Zhu, Y. (2015). Internal migration data around the world: assessing contemporary practice. *Popul. Place* 21, 1–17. doi: 10.1002/psp.1848
- Bernard, A. (2017). Levels and patterns of internal migration in Europe: a cohort perspective. *Popul. Stud.* 71, 293–311. doi: 10.1080/00324728.2017.1360932
- Botha, J., and Kourkoutas, E. (2016). A community of practice as an inclusive model to support children with social, emotional and behavioural difficulties in school contexts. *Int. J. Inclusive Educ.* 20, 784–799. doi: 10.1080/13603116.2015.1111448
- Boynton-Jarrett, R., Hair, E., and Zuckerman, B. (2013). Turbulent times: effects of turbulence and violence exposure in adolescence on high school completion, health risk behavior, and mental health in young adulthood. *Soc. Sci. Med.* 95, 77–86. doi: 10.1016/j.socscimed.2012.09.007
- Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design*. Cambridge: Harvard University Press.
- Bronfenbrenner, U., and Morris, P. A. (2006). “The bioecological model of human development,” in *Handbook of Child Psychology: Theoretical Models of Human Development*, eds R. M. Lerner, and W. Damon, (Hoboken, NJ: John Wiley & Sons Inc.).
- Caspi, A., Wright, B. R. E., Moffitt, T. E., and Silva, P. A. (1998). Early failure in the labor market: childhood and adolescent predictors of unemployment in the transition to adulthood. *Am. Sociol. Rev.* 63, 424–451.
- Chandola, T., Clarke, P., Wiggins, R. D., and Bartley, M. (2005). Who you live with and where you live: setting the context for health using multiple membership multilevel models. *J. Epidemiol. Commun. Health* 59, 170–175. doi: 10.1136/jech.2003.019539
- Chaudhary, M. (2011). *Sju av ti fullfører videregående opplæring. [Seven out of ten complete secondary education]. (In Norwegian), in: Samfunnsspeilet 2011/5-6, Statistics Norway. Available at: <https://www.ssb.no/utdanning/artikler-og-publikasjoner/sju-av-ti-fullforer-videregaaende-opplaering> (accessed April 15, 2019).*
- Child Trends, (2015). *World Family Map 2015: Mapping Family Change and Child Well-being Outcomes. An International Report from Child Trends*. Bethesda, MD: Child Trends.
- Chung, H., and Beretvas, S. N. (2012). The impact of ignoring multiple membership data structures in multilevel models. *Br. J. Math. Stat. Psychol.* 65, 185–200. doi: 10.1111/j.2044-8317.2011.02023.x
- Corrás, T., Seijo, D., Fariña, F., Novo, M., Arce, R., and Cabanach, R. (2017). What and how much do children lose in academic settings owing to parental separation? *Front. Psychol.* 8:1545. doi: 10.3389/fpsyg.2017.01545
- Coulton, C. J., Crampton, D. S., Irwin, M., Spilsbury, J. C., and Korbin, J. E. (2007). How neighborhoods influence child maltreatment: a review of the literature and alternative pathways. *Child Abuse Negl.* 31, 1117–1142. doi: 10.1016/j.chiabu.2007.03.023
- De Ridder, K. A., Pape, K., Johnsen, R., Holmen, T. L., Westin, S., and Bjørngaard, J. H. (2013). Adolescent health and high school dropout: a prospective cohort study of 9000 norwegian adolescents (the young-HUNT). *PLoS One* 8:e74954. doi: 10.1371/journal.pone.0074954
- De Ridder, K. A., Pape, K., Johnsen, R., Westin, S., Holmen, T. L., and Bjørngaard, J. H. (2012). School dropout: a major public health challenge: a 10-year prospective study on medical and non-medical social insurance benefits in young adulthood, the young-HUNT 1 study (Norway). *J. Epidemiol. Community Health* 66, 995–1000. doi: 10.1136/jech-2011-200047
- DeLuca, S., and Dayton, E. (2009). Switching social contexts: the effects of housing mobility and school choice programs on youth outcomes. *Annu. Rev. Sociol.* 35, 457–491. doi: 10.1146/annurev-soc-070308-120032
- Dundas, R., Leyland, A. H., and Macintyre, S. (2014). Early-life school, neighborhood, and family influences on adult health: a multilevel cross-classified analysis of the aberdeen children of the 1950s study. *Am. J. Epidemiol.* 180, 197–207. doi: 10.1093/aje/kwu110
- Dupere, V., Archambault, I., Leventhal, T., Dion, E., and Anderson, S. (2015). School mobility and school-age children's social adjustment. *Dev. Psychol.* 51, 197–210. doi: 10.1037/a0038480
- Fantuzzo, J., Mcwayne, C., Perry, M. A., and Childs, S. (2004). Multiple dimensions of family involvement and their relations to behavioral and learning competencies for urban, low-income children. *School Psychol. Rev.* 33, 467–480.

- Feijten, P., and Van Ham, M. (2007). Residential mobility and migration of the divorced and separated. *Demogr. Res.* 17, 623–654. doi: 10.4054/demres.2007.17.21
- Fowler, P. J., Henry, D. B., and Marcal, K. E. (2015). Family and housing instability: longitudinal impact on adolescent emotional and behavioral well-being. *Soc. Sci. Res.* 53, 364–374. doi: 10.1016/j.ssresearch.2015.06.012
- Garboden, P. M., Leventhal, T., and Newman, S. (2017). Estimating the effects of residential mobility: a methodological note. *J. Soc. Ser. Res.* 43, 246–261. doi: 10.1080/01488376.2017.1282392
- Gasper, J., Deluca, S., and Estacion, A. (2012). Switching schools: revisiting the relationship between school mobility and high school dropout. *Am. Educ. Res. J.* 49, 487–519. doi: 10.3102/0002831211415250
- Goldstein, H. (1995). *Multilevel Statistical Models*. London: Arnold.
- Graham, A., Powell, M. A., and Truscott, J. (2016). Facilitating student well-being: relationships do matter. *Educ. Res.* 58, 366–383. doi: 10.1080/00131881.2016.1228841
- Haelermans, C., and De Witte, K. (2015). Does residential mobility improve educational outcomes? Evidence from the Netherlands. *Soc. Sci. Res.* 52, 351–369. doi: 10.1016/j.ssresearch.2015.02.008
- Hagan, J., Macmillan, R., and Wheaton, B. (1996). New kid in town: social capital and the life course effects of family migration on children. *Am. Sociol. Rev.* 61, 368–385.
- Hanushek, E. A., Kain, J. F., and Rivkin, S. G. (2004). Why public schools lose teachers. *J. Hum. Resour.* 39, 326–354. doi: 10.3368/jhr.xxxix.2.326
- Haynie, D. L., and South, S. J. (2005). Residential mobility and adolescent violence. *Soc. Forces* 84, 361–374. doi: 10.1353/sof.2005.0104
- Jackson, M., and Mare, R. (2009). *Distinguishing Between the Effects of Residential Mobility and Neighborhood Change on Children's Well-Being: A Research Note*. California: California Center for Population Research.
- Jelleyman, T., and Spencer, N. (2008). Residential mobility in childhood and health outcomes: a systematic review. *J. Epidemiol. Comm. Health* 62, 584–592. doi: 10.1136/jech.2007.060103
- Leckie, G. (2013). Cross-classified multilevel models-concepts. *LEMMA VLE Module* 12, 1–60.
- Marmot, M. G., and Bell, R. (2012). Fair society, healthy lives. *Public Health* 126(Suppl. 1), S4–S10.
- Merlo, J., Chaix, B., Yang, M., Lynch, J., and Råstam, L. (2005). A brief conceptual tutorial of multilevel analysis in social epidemiology: linking the statistical concept of clustering to the idea of contextual phenomenon. *J. Epidemiol. Community Health* 59, 443–449. doi: 10.1136/jech.2004.023473
- Metzger, M. W., Fowler, P. J., Anderson, C. L., and Lindsay, C. A. (2015). Residential mobility during adolescence: do even “upward” moves predict dropout risk? *Soc. Sci. Res.* 53, 218–230. doi: 10.1016/j.ssresearch.2015.05.004
- Ministry of Education and Research, (2007). *Education - From Kindergarten to Adult Education*. Oslo: Norwegian Ministry of Education and Research.
- Morris, T., Manley, D., and Sabel, C. E. (2018). Residential mobility: towards progress in mobility health research. *Prog. Hum. Geogr.* 42, 112–133. doi: 10.1177/0309132516649454
- Murphey, D., Bandy, T., and Moore, K. A. (2012). *Frequent Residential Mobility and Young Children's Well-Being*. Washington, DC: Child Trends.
- Myhr, A., Haugan, T., Lillefjell, M., and Halvorsen, T. (2018). Non-completion of secondary education and early disability in Norway: geographic patterns, individual and community risks. *BMC Public Health* 18:682. doi: 10.1186/s12889-018-5551-1
- Myhr, A., Lillefjell, M., Espnes, G. A., and Halvorsen, T. (2017). Do family and neighbourhood matter in secondary school completion? A multilevel study of determinants and their interactions in a life-course perspective. *PLoS One* 12:e0172281. doi: 10.1371/journal.pone.0172281
- OECD, (2018). *Education at a Glance 2018: OECD Indicators*. Paris: OECD Publishing.
- Oishi, S., and Schimmack, U. (2010). Residential mobility, well-being, and mortality. *J. Personal.* 98, 980–994. doi: 10.1037/a0019389
- Rabe-Hesketh, S., and Skrondal, A. (2012). *Multilevel and Longitudinal Modeling using Stata*. College Station, TX: STATA press.
- Rasbash, J., Leckie, G., Pillinger, R., and Jenkins, J. (2010). Children's educational progress: partitioning family, school and area effects. *J. R. Stat. Soc.* 173, 657–682. doi: 10.1111/j.1467-985x.2010.00642.x
- Ross, C. E., and Mirowsky, J. (2011). The interaction of personal and parental education on health. *Soc. Sci. Med.* 72, 591–599. doi: 10.1016/j.socscimed.2010.11.028
- Sampson, R. J., Morenoff, J. D., and Gannon-Rowley, T. (2002). Assessing “neighborhood effects”: social processes and new directions in research. *Ann. Rev. Sociol.* 28, 443–478. doi: 10.1146/annurev.soc.28.110601.141114
- Scanlon, E., and Devine, K. J. J. S. (2001). Residential mobility and youth well-being: research, policy, and practice issues. *J. Sociol. Soc. Welf.* 28, 119.
- Schaan, B. (2014). The interaction of family background and personal education on depressive symptoms in later life. *Soc. Sci. Med.* 102, 94–102. doi: 10.1016/j.socscimed.2013.11.049
- Seijo, D., Fariña, F., Corras, T., Novo, M., and Arce, R. (2016). Estimating the epidemiology and quantifying the damages of parental separation in children and adolescents. *Front. Psychol.* 7:1611. doi: 10.3389/fpsyg.2016.01611
- Sharkey, P., and Faber, J. W. (2014). Where, when, why, and for whom do residential contexts matter? Moving away from the dichotomous understanding of neighborhood effects. *Ann. Rev. Sociol.* 40, 559–579. doi: 10.1146/annurev-soc-071913-043350
- Snijders, T. A. B., and Bosker, R. (2012). *Multilevel Analysis: An Introduction to Basic and Advanced Multilevel Modeling*. London: Sage Publishers.
- South, S. J., Haynie, D. L., and Bose, S. (2007). Student mobility and school dropout. *Soc. Sci. Res.* 36, 68–94. doi: 10.1016/j.ssresearch.2005.10.001
- Statistics Norway. (2001). *Norwegian Standard Classification of Education*. Oslo: Kongsvinger Statistics Norway.
- Statistics Norway, (2018). *Gjennomføring i videregående opplæring* [Online]. Available: <https://www.ssb.no/vgogjen> (accessed March 26, 2019).
- Støren, L. A., and Helland, H. (2009). Ethnicity differences in the completion rates of upper secondary education: how do the effects of gender and social background variables interplay? *Eur. Sociol. Rev.* 26, 585–601. doi: 10.1093/esr/jcp041
- Tucker, C. J., Marx, J., and Long, L. (1998). Moving on: residential mobility and children's school lives. *Sociol. Educ.* 71, 111–129. doi: 10.1007/s11524-019-00356-2
- Viner, R. M., Ozer, E. M., Denny, S., Marmot, M., Resnick, M., Fatusi, A., et al. (2012). Adolescence and the social determinants of health. *Lancet* 379, 1641–1652.
- Voight, A., Shinn, M., and Nation, M. (2012). The longitudinal effects of residential mobility on the academic achievement of urban elementary and middle school students. *Educ. Res.* 41, 385–392. doi: 10.3102/0013189x12442239
- Warner, C., and Sharp, G. (2016). The short-and long-term effects of life events on residential mobility. *Adv. Life Course Res.* 27, 1–15. doi: 10.1016/j.alcr.2015.09.002
- Webb, R. T., Pedersen, C. B., and Mok, P. L. (2016). Adverse outcomes to early middle age linked with childhood residential mobility. *Am. J. Prev. Med.* 51, 291–300. doi: 10.1016/j.amepre.2016.04.011

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2019 Haugan and Myhr. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



Reconciling Contemporary Approaches to School Attendance and School Absenteeism: Toward Promotion and Nimble Response, Global Policy Review and Implementation, and Future Adaptability (Part 1)

Christopher A. Kearney^{1*}, Carolina González², Patricia A. Graczyk³ and Mirae J. Fornander¹

¹Department of Psychology, University of Nevada, Las Vegas, Las Vegas, NV, United States, ²Department of Developmental Psychology and Teaching, University of Alicante, San Vicente del Raspeig, Spain, ³Department of Psychiatry, University of Illinois at Chicago, Chicago, IL, United States

OPEN ACCESS

Edited by:

Douglas F. Kauffman,
Medical University of the
Americas – Nevis, United States

Reviewed by:

Gianluca Serafini,
San Martino Hospital (IRCCS), Italy
Nina Klang,
Uppsala University, Sweden

*Correspondence:

Christopher A. Kearney
chris.kearney@unlv.edu

Specialty section:

This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Psychology

Received: 03 July 2019

Accepted: 17 September 2019

Published: 16 October 2019

Citation:

Kearney CA, González C,
Graczyk PA and Fornander MJ (2019)
Reconciling Contemporary
Approaches to School Attendance
and School Absenteeism: Toward
Promotion and Nimble Response,
Global Policy Review and
Implementation, and Future
Adaptability (Part 1).
Front. Psychol. 10:2222.
doi: 10.3389/fpsyg.2019.02222

School attendance is an important foundational competency for children and adolescents, and school absenteeism has been linked to myriad short- and long-term negative consequences, even into adulthood. Many efforts have been made to conceptualize and address this population across various categories and dimensions of functioning and across multiple disciplines, resulting in both a rich literature base and a splintered view regarding this population. This article (Part 1 of 2) reviews and critiques key categorical and dimensional approaches to conceptualizing school attendance and school absenteeism, with an eye toward reconciling these approaches (Part 2 of 2) to develop a roadmap for preventative and intervention strategies, early warning systems and nimble response, global policy review, dissemination and implementation, and adaptations to future changes in education and technology. This article sets the stage for a discussion of a multidimensional, multi-tiered system of supports pyramid model as a heuristic framework for conceptualizing the manifold aspects of school attendance and school absenteeism.

Keywords: school attendance, school absenteeism, truancy, school refusal, school withdrawal, school exclusion, multi-tiered system of supports, response to intervention

INTRODUCTION

School attendance and successful graduation from high school or its equivalent have long been recognized as crucial foundational competencies for children and adolescents. Strong school attendance and successful graduation are closely linked to broad, positive outcome variables such as enhanced lifetime earning potential and economic empowerment (Balfanz et al., 2014; Balfanz, 2016), opportunities for higher education and other avenues of adult and career readiness (Darling-Hammond et al., 2014), improved health and reduced death rates (Freudenberg and Ruglis, 2007; Allison and Attisha, 2019), better civic engagement and outcomes (Zaff et al., 2017; DePaoli et al., 2018), and critical thinking, risk aversion, and life skills that impact positive economic and health-based choices (Brunello and De Paola, 2014). In related fashion, strong school attendance and successful graduation may enhance quality of life and buffer against

negative mental and physical health outcomes (Rumberger, 2011; U.S. Census Bureau, 2012; Lee et al., 2016).

Conversely, school attendance problems, including school absenteeism, have long been recognized as a critical developmental challenge and limiting factor for children and adolescents (Kearney, 2016). School attendance problems in various forms have been linked to a wide array of academic deficiencies such as reduced educational performance, lower reading and mathematics test scores, fewer literacy skills, grade retention, and school dropout (Bridgeland et al., 2006; Burton et al., 2014; Smerillo et al., 2018). School attendance problems are closely linked as well to internalizing behavior problems such as anxiety, depression (including issues of suicidal behavior and bereavement), and social isolation (Ek and Eriksson, 2013; Pompili et al., 2013; Miller et al., 2015; Finning et al., 2019; Knollmann et al., 2019) as well as externalizing behavior problems such as elevated alcohol, tobacco, marijuana, and other drug use (Henry and Huizinga, 2007; Holtes et al., 2015), risky sexual behaviors (Allison and Attisha, 2019), oppositional defiant and conduct problems (Wood et al., 2012), impaired social functioning and poor relationships with peers (Havik et al., 2015; Gonzalez et al., 2019), and involvement with the juvenile justice system (Anderson et al., 2016). School attendance problems are connected to myriad adverse childhood experiences such as trauma, school violence and victimization, and medical problems as well (Hutzell and Payne, 2012; Ramirez et al., 2012; Emerson et al., 2016; Hsu et al., 2016; McLean et al., 2017; Stempel et al., 2017; Berendes et al., 2019).

School attendance problems have long-lasting effects even into adulthood, including enhanced risk for marital and psychiatric problems (Hibbett and Fogelman, 1990), non-violent crime and substance use (Henry et al., 2012; Rocque et al., 2017), and occupational problems and economic deprivation (Christenson and Thurlow, 2004; Bridgeland et al., 2006). Students who drop out of high school are 24 times more likely than graduates to experience four or more negative life outcomes (Lansford et al., 2016). The societal outlays for school dropout are substantial as well, including elevated economic costs due to increased crime, incarceration, public assistance, unemployment, and medical coverage as well as reduced mobility, tax revenues, earnings, entrepreneurship, and productivity (Marchbanks et al., 2014; Latif et al., 2015; Levin, 2017).

School attendance problems have no consensus definition (see later section) but lack of school attendance as well as permanent school dropout have been identified as widespread global phenomena with substantial prevalence rates, especially among developing areas such as sub-Saharan and northern Africa and southern and western Asia. Nearly one of five children and adolescents worldwide (17.8%) are out of school, a rate more than doubled among upper secondary school-age youth (36.3%) and elevated among girls and those in low-income countries. Even in Europe and North America, the out-of-school rate is 4.3% (UNESCO Institute for Statistics, 2016). In the United States, the high school graduation rate is 84.1%, the status dropout rate is 6.1%, and the chronic absenteeism rate (federally defined as missing 15+ (8.3%) days of school in one academic year) is 16.0%, a rate elevated among diverse youth, students with disabilities, and high school students (21.1%) (DePaoli et al.,

2018; National Center for Education Statistics, 2018; U.S. Department of Education, 2019). As such, school attendance is often viewed as a key linchpin for prevention science and for curbing mental health and other problems in children and adolescents worldwide (Kieling et al., 2011; Catalano et al., 2012).

The substantial impact and prevalence of school attendance and school absenteeism (SA/A) have led researchers across many disciplines to study these phenomena, including those in psychology, education, criminal and juvenile justice, social work, medicine, psychiatry, nursing, epidemiology, public and educational policy, program evaluation, leadership, child development, and sociology, among other professions (Elliot, 1999; Kearney, 2003; Birioukov, 2016). Research in this area has been conducted for over a century, making SA/A among the longest-investigated issues among children and adolescents (Kearney, 2001). This lengthy period of study has led to a plethora of terms and approaches to describe this population, which has led simultaneously to a rich literature base but also to considerable splintering across disciplines and thus a lack of consensus with respect to defining, conceptualizing, classifying, assessing, and addressing SA/A (Kearney, 2016, 2019). Such splintering has likely led to dissemination and implementation barriers regarding empirically based strategies for SA/A (Arora et al., 2016).

EVOLUTION OF CONCEPTS IN SCHOOL ATTENDANCE AND SCHOOL ABSENTEEISM

The purpose of this article is to draw upon this rich and disparate literature base to begin to reconcile various contemporary approaches to SA/A and to develop a heuristic framework for conceptualizing this population moving forward. Such a framework is necessary given several needs: to promote school attendance as much as to reduce absenteeism, to respond nimbly to emerging school attendance problems, to inform policy review, to provide general applicability to various jurisdictions and cultures, and to adapt to future and rapid changes in education and technology. As such, a contemporary framework for SA/A will need to be inclusive, flexible, applicable, educational, and pliable.

Efforts to conceptualize SA/A are manifold, in part because of the heterogeneous nature of the constructs and because risk factors for these problems are multilayered and myriad (van der Woude et al., 2017). However, these conceptualization efforts can be grouped generally into categorical and dimensional approaches. Historical efforts to conceptualize SA/A began with categorical terms, dichotomies, and distinctions to try to sort youth with school attendance problems into defined groups in an effort to better understand the mechanisms underlying such behaviors (Kearney, 2001). Categorical approaches broadly aim for within-category homogeneity and between-category qualitative differences (De Boeck et al., 2005), goals that have been somewhat elusive for SA/A (DiBartolo and Braun, 2017).

Other efforts to conceptualize SA/A have focused more on dimensional approaches to better reflect the heterogeneity, fluidity, scalability, and complexity of these constructs (Kearney and Silverman, 1996). Such approaches, described in more

detail in later sections, focus on fluid or latent constructs such as attendance profiles, absenteeism severity, risk factors, functions, and interventions that can be arranged along various spectra or continua (Maynard et al., 2012). Dimensional approaches generally aim for within-category heterogeneity and between-category quantitative differences (De Boeck et al., 2005), goals that can also be challenging for SA/A (Heyne et al., 2019).

The juxtaposition of categorical and dimensional approaches to mental health and related challenges has led historically to strong debates about which approach best characterizes a given phenomenon or set of phenomena such as mental disorders (Widiger and Samuel, 2005). Such debate is intensified by the fact that specific taxa for personality and psychopathology are difficult to distinguish even though clinicians and educational and mental health agencies often rely on categorical approaches (Haslam et al., 2012). In addition, mental disorders and psychopathological constructs can be categorically different from normal function in some cases (e.g., psychotic or eating disorder) but not in other cases (e.g., personality disorder, worry), further muddying the classification waters (Ruscio and Ruscio, 2008).

Coghill and Sonuga-Barke (2012) described several avenues for reconciling this debate with respect to mental health and other challenges in children and adolescents. These avenues include replacing categorical with dimensional approaches at various levels or utilizing a mixed approach whereby categories and dimensions are considered alongside one another. With respect to the latter avenue, this could include allowing some phenomena to be described categorically (e.g., autism, endogenous depression) and other phenomena to be described dimensionally (e.g., psychopathy, exogenous depression). Or, in a mixed approach, both categorical and dimensional approaches could be used together within the same class of disorder (e.g., the category of attention-deficit/hyperactivity disorder with dimensions of inattentiveness and hyperactivity/impulsivity). Coghill and Sonuga-Barke (2012) maintained that systems based on both categorical and dimensional approaches can coexist within a single problem by serving different but equally useful purposes.

The next sections of this article (Part 1 of the review) contain brief descriptions of common categorical terms and distinctions as well as dimensional approaches to the study of SA/A. These sections also briefly describe the advantages and disadvantages of each method. In Part 2 of this review, we adopt Coghill and Sonuga-Barke's (2012) premise that both categorical and dimensional approaches can be applied to a given heterogeneous construct such as SA/A and, indeed, that these approaches are wholly compatible with one another with respect to SA/A. In addition, such compatibilities may be helpful for developing a roadmap for researchers, clinicians, and educators to follow as they work to develop preventative and nimble responses to SA/A, disseminate research work, and adapt to future changes in education and technology.

TERMINOLOGY

As mentioned, school attendance problems have no consensus definition, in part because of the various terms used to describe

this population from different disciplines. This section provides general descriptions of common categorical terms utilized in the field, with the strong caveat that considerable controversy and heterogeneity remain even with respect to these characterizations (Kiani et al., 2018). Most broadly, *school attendance* has traditionally referred to a student's complete in-class physical presence during an academic day and *school absenteeism* has traditionally referred to a student's complete in-class physical absence during an academic day (Kearney, 2019). School absenteeism is sometimes categorized as *excused* or *unexcused* (or *authorized* or *unauthorized*) in nature, referring to absence due to some legitimate reason such as illness or absence due to some illegitimate reason such as peer association outside of school (Gottfried, 2009). *School attendance problems*, which can include school absenteeism, refer generally to either a collection of different kinds of absences (e.g., late to school/tardiness; skipped class or missed time of day) or to general difficulties attending or getting to school that can involve a wide array of individual and contextual factors (Kearney, 2016). School attendance problems can lead eventually to *school stopout*, which refers to temporary departure from school prior to graduation, and/or *school dropout/stayout*, which refers to permanent, premature departure from school prior to graduation (Boylan and Renzulli, 2017).

Several terms in the literature refer generally, though not always, to youth-based school attendance problems, or absences initiated primarily by a child or adolescent, with the caveat that many different risk factor levels (e.g., parent, peer, school) apply to this population. *Truancy* is one of the oldest terms for school attendance problems and refers generally to illegal, unexcused (see later section) school absenteeism. Truancy is a term often utilized by school districts and/or larger entities to construct policies and definitions, such as 10 unexcused absences in a given semester or 15-week period, that trigger some legal, punitive, or administrative consequence (Sutphen et al., 2010). From a research perspective, truancy is often associated as well with delinquency, externalizing behavior problems, and social conditions such as poverty (Zhang et al., 2010).

School refusal refers broadly to school attendance problems due to emotional difficulties such as general and social and separation anxiety, worry, distress, and sadness (Elliott and Place, 2019). A related but archaic term, *school phobia*, refers more specifically to fear-based school attendance problems such as avoidance of a specific object at school or related to school (e.g., alarm, animal, bus) that leads to absenteeism (Inglés et al., 2015). *School refusal behavior* refers to a child-motivated refusal to attend school or difficulties remaining in classes for an entire day (Kearney and Silverman, 1990, 1996). School refusal behavior may or may not be related to emotional distress about school, and thus serves as an umbrella term for constructs such as truancy and school refusal.

Other terms in the literature refer to school attendance problems initiated primarily by entities other than the child, again with the caveat that multiple risk factor levels apply to each. *School withdrawal* refers generally to parent-initiated school absenteeism (Kahn and Nursten, 1962; Kearney and Fornander, 2018). Parents or other caregivers may deliberately keep a child home from school for employment or child care purposes, to

conceal maltreatment, to protect a child from perceived harm (e.g., school violence or victimization, kidnapping by an ex-spouse), to punish a child, or to mitigate a parent's separation anxiety or psychopathology due to anxiety, depression, substance use, or other problem, among other reasons (Kearney, 2001).

In addition, *school exclusion* refers generally to school-initiated absenteeism. Such exclusion may involve lawful exclusionary disciplinary practices such as suspension or expulsion for behavior problems or for, ironically, school absenteeism (Maag, 2012). School exclusion practices are often associated with zero tolerance policies regarding certain student behaviors, particularly those related to violence and other dangerous behavior (Theriot et al., 2010). School exclusion may also involve unlawful, unclear, or more nefarious reasons such as sending students (in particular special needs students) home or restricting their ability to attend school without official documentation (McCluskey et al., 2016).

CATEGORICAL DISTINCTIONS

Related to these historical terms have been various broad-band and etiologically based categorical dichotomies and distinctions for SA/A. These dichotomies and distinctions have been generally designed to carve out groups of youth with different school attendance problems to help identify causal factors as well as basic treatment direction and scope (Reid, 2013).

School Refusal-Truancy

An enduring categorical dichotomy has involved school refusal-truancy, which has been historically based on an internalizing-externalizing behavior problem distinction (Young et al., 1990). School refusal is often linked to internalizing difficulties such as anxiety and depression, whereas truancy is often linked to externalizing difficulties such as oppositional and conduct problems (Dembo et al., 2016). In addition, school refusal is sometimes associated with parental knowledge of a child's absenteeism, whereas truancy is often tied to lack of parental knowledge (Bobakova et al., 2015). School refusal may be more associated with primary or early secondary grades, whereas truancy may be more associated with later secondary grades (Melvin et al., 2017; Pengpid and Peltzer, 2017). School refusal may be more associated with certain family dynamics such as enmeshment, whereas truancy may be more associated with certain family dynamics such as conflict (McConnell and Kubina Jr, 2014; Richardson, 2016).

A main advantage of a school refusal-truancy distinction is its face validity, as some children are clearly anxious and thus avoidant of school whereas some adolescents refuse or decline to attend school without emotional difficulty and with perhaps more delinquency (Berg, 1997; Evans, 2000). The dichotomy carries a significant number of disadvantages, however. First, numerous studies and reviews have demonstrated considerable heterogeneity *within* each construct (Inglés et al., 2015). School refusal is linked to a wide variety of anxiety- and mood-based conditions in addition to fairly broad terms such as emotional distress, avoidance, malingering, dread, worry, fear, somatic complaints, and negative affectivity (e.g., Sibeoni et al., 2018). In addition, truancy is a highly heterogeneous construct with

multiple dimensions related to academic status, disability profile, location, race/ethnicity, activities in and out of school, individual-group-orientation, premediated-spontaneous, parental academic involvement, and type and number of classes skipped, among many other variables (Reid, 1999; Chen et al., 2016; Dahl, 2016; Sälzer and Heine, 2016; Keppens and Spruyt, 2017; Maynard et al., 2017). Truancy as a legal construct is also highly variably defined across many jurisdictions (Gentle-Genitty et al., 2015).

Second, many researchers have demonstrated substantial heterogeneity *across* the two constructs. Both school refusal and truancy have been associated, for example, with learning and health difficulties, effects from bullying, social interaction problems, maltreatment, chronic illness, and, of course, missing school (Katz et al., 2016; Lum et al., 2017). In addition, both constructs can be similarly influenced by broader classes of contextual factors related to peers, schools, and communities (Baier, 2016; Sugrue et al., 2016; Burdick-Will et al., 2019). Many historical and statistical studies have also demonstrated either considerable overlap of school refusal and truancy and/or other, large unclassified categories (Torma and Halsti, 1975; Berg et al., 1985; Cooper, 1986; Atkinson et al., 1989; Bools et al., 1990; Dube and Orpinas, 2009). Many researchers historically have gravitated toward conclusions of dimensionality to describe this population (e.g., Rubenstein and Hastings, 1980; Kolvin et al., 1984; Hersov, 1985).

More specifically, meta-analytic and large-scale studies reveal broad, extensive overlap of internalizing and externalizing symptoms, absence types, and interventions for school refusal and truancy (Egger et al., 2003; Finning et al., 2018, 2019; Maynard et al., 2012, 2018). Neither pathognomonic nor reliable assident factors associated with the constructs have been identified, which often leads to interchangeable use of the terms in research and clinical practice (Brandibas et al., 2004). Contemporary notions of school refusal and truancy address these concerns to a degree (Heyne et al., 2019), though commonalities remain, such as tantrums, physical symptoms, reluctance or refusal to attend school, depression, sleep problems, variability in school attendance, and parental desire to have a child back in school.

Third, in related fashion, a school-refusal truancy distinction tends to erode in value at the point of clinical presentation. In the modern technological age, many parents are informed immediately of a child's school absence, diminishing the value of distinguishing absenteeism based simply on parental knowledge or even consent (Smythe-Leistico and Page, 2018). Some parents are also skilled at securing medical notes or other methods to induce schools to record absences as excused in nature (Kearney, 2019). In addition, many children initially miss school due to anxiety but are later drawn to the amenities of staying home, and many adolescents who have been out of school for some time experience spikes in anxiety upon initial reintegration to school. Indeed, many youth described with school refusal or truancy traverse frequently between these groups (Birioukov, 2016). Clinicians are thus often faced with the challenge of choosing the best intervention for a child's school attendance problems that appear to be of various types (Maynard et al., 2013; Kearney and Albano, 2018).

Finally, the concept of truancy carries with it many negative connotations that are not necessarily ascribed to concepts such

as school refusal. Truancy is often used as a legal or institutional term, whereas school refusal is not, which may create stigmatization problems (Campbell and Wright, 2005; Strand, 2014). Indeed, anxiety-related school refusal may be viewed more sympathetically by school staff than truancy (Finning et al., 2019) and the label of truancy is often associated with willful, deliberate, deviant behavior (Lyon and Cotler, 2007; Birioukov, 2016). Educational and mental health agencies often emphasize the concept of truancy (in some form) in their definitions and discussions of problematic school absenteeism, but rarely that of school refusal or related terms (Gleich-Bope, 2014).

In related fashion, the overall concept of truancy has been criticized as representing more of a punitive paradigm that disproportionately affects vulnerable and at-risk youth and that contributes to the school-to-prison pipeline (Mallett, 2016; Nauer, 2016). The concept of truancy also tends to be associated with lower socioeconomic youth who experience barriers to attending school such as domestic and neighborhood violence, unstable housing conditions, lack of school supplies, housing and transportation problems, and safety concerns coming to school (Flaherty et al., 2012; Gottfried, 2017). Others view truancy less as an aberrant behavior than as a form of systemic discrimination that reflects the uneven distribution of social goods and opportunities within a larger society (Yang and Ham, 2017); others see truancy as deliberate student resistance against an unfair academic system (McIntyre-Bhatti, 2008).

Excused-Unexcused Absences

Many school districts and some researchers also utilize an excused-unexcused absences dichotomy to categorize school attendance problems (Hough, 2019). Key advantages of this approach include its administrative practicality and simplicity, linkage to district and state policies regarding excessive absenteeism, historical connection (unexcused absences) to truancy, and utility in examining ratios of excused to unexcused absences (Gottfried, 2009). In addition, some have found that students absent without permission display approximately twice the odds of engaging in risky behaviors (e.g., unintentional injuries and violence, substance use, sexual behaviors) than students absent with permission (Eaton et al., 2008). Others have found that anxiety and depression symptoms are good predictors of unexcused absences in sexual minority youth (Burton et al., 2014).

An excused-unexcused absence dichotomy has several disadvantages, however. Numerous studies have illustrated ancillary problems associated with school absenteeism whether excused or unexcused, combine these absences when evaluating outcomes, or have found few differences based on this absence typology (Baker and Jansen, 2000; Redmond and Hosp, 2008; Spencer, 2009; Wood et al., 2012; Morrissey et al., 2014). For example, Gottfried (2009) found that excused and unexcused absences were both significantly related to various demographic, academic, and behavioral variables. Dube and Orpinas (2009) similarly found no difference between excused and unexcused absences across various profiles of youth with school attendance problems. The fidelity of data collected by school districts in this regard remains problematic as well, particularly because the arbiter of whether an absence is excused or unexcused is

typically a family member and sometimes not a parent (Birioukov, 2016; Conry and Richards, 2018). In addition, excused absences may include legitimate reasons such as illness but also institutional or questionable reasons such as court dates, school suspensions, family vacations, or minor health conditions accommodated by physician notes (Reid, 2007; Outhouse, 2012).

In addition, reliance on an excused-unexcused absence dichotomy, particularly within school districts, often delays intervention until some legal tripwire is triggered (e.g., 10 unexcused absences in a semester). Some have criticized this approach as a “wait to fail” process that can enhance risk for school dropout (Cramer et al., 2014; Kearney and Graczyk, 2014). Indeed, the importance of early intervention for school attendance problems is quite clear in the literature (McCluskey et al., 2004; Sutphen et al., 2010). From a clinical perspective, evaluating total amount of time missed from school for any reason for a particular case may be advisable (Kearney and Albano, 2018).

School Withdrawal and School Exclusion

As mentioned earlier, other categorical distinctions for school absenteeism have focused on parent-initiated (school withdrawal) and school-initiated (school exclusion) reasons. Potential explanations for parent-initiated school withdrawal were noted earlier. School exclusion can refer to disciplinary practices administered for absenteeism and other behavioral infractions, which usually means a child is not allowed to attend classes for a set period of time (Parker et al., 2015). Suspension can be in-school, meaning a child is physically in the school building but not in class, or out-of-school, meaning a child is not allowed on the school campus until certain requirements (e.g., parent conference, time away) are met. In related fashion, expulsion refers to permanent, administrative separation from a particular school, which sometimes applies to very severe infractions and possibly absenteeism and sometimes in response to zero tolerance policies (Allman and Slate, 2011). Other exclusionary practices such as detention may be utilized as well. In addition, as noted earlier, others have focused on school exclusion as school-initiated absence that is unlawful or that represents lack of appropriate accommodations (Reid, 2010).

A key advantage of identifying school withdrawal and school exclusion in cases of absenteeism involves rapid identification of non-child-based reasons for nonattendance and thus alternative assignment of treatment resources (e.g., toward parents or working with school officials) (e.g., Daniels and Cole, 2010). However, school district policies that emphasize suspension and expulsion to address school attendance problems lead paradoxically to more dropout, delinquency, lag in academic achievement, and student involvement with the juvenile justice system (Suh et al., 2007; Stone and Stone, 2011; Monahan et al., 2014). In addition, school exclusion does not appear to differ among various clusters of youth with school absenteeism (Gallé-Tessonneau et al., 2019). Unlawful school exclusion is also vaguely defined, difficult to track, and easily reframed as lawful school exclusion (McCluskey et al., 2016).

School exclusion policies also tend to be disproportionately assigned to low-income and diverse students (Shabazian, 2015).

As such, exclusionary disciplinary policies have come under harsh criticism and are increasingly being reviewed and de-emphasized in many districts (Perry and Morris, 2014; Curran, 2016). Alternative responses that include greater proximity to school could involve sanctions such as in-school suspension and school-based community service as well as restorative practices such as mentoring and remediation of academic difficulties (Haight et al., 2014; McNeill et al., 2016; Gregory et al., 2018).

Acute-Chronic

Another common historical dichotomy has been to distinguish acute from chronic school absenteeism. Though variously defined, acute cases of absenteeism often refer to those lasting less than one calendar year, whereas chronic cases of absenteeism often refer to those lasting more than one calendar year, or at least across two or more academic years (Baker and Wills, 1978; Berg et al., 1985). Some also distinguish between self-corrective problems lasting less than 2 weeks and acute problems lasting 2–52 weeks (Kearney and Silverman, 1996; Mauro and Machell, 2019). An acute-chronic distinction has been linked as well to more immediate onset involving emotional distress, akin to school refusal, and more insidious onset involving conduct problems, akin to truancy (Pellegrini, 2007). As such, an acute-chronic distinction is sometimes associated with other historical dichotomies such as Type 1-Type 2, common-induced, and neurotic-characterological (Kearney, 2001).

A key advantage of an acute-chronic distinction is a quick delineation of length of an absenteeism problem, which can be generally associated with breadth of intervention needed to resolve the problem. In general, more lengthy cases of absenteeism require more complex intervention and with multiple parties than less lengthy cases (Thambirajah et al., 2008). Prognostic outcomes for youth with more lengthy absenteeism tend to be poorer than those with less lengthy absenteeism (Kearney et al., 2010). An understanding of a child's developmental history regarding his or her school attendance problems has substantial clinical value as well (Veenstra et al., 2010). Disadvantages to an acute-chronic distinction include variable timelines posed by researchers and the need for more empirical data to support a particular timeline distinction (Kearney, 2003; Balfanz and Byrnes, 2012).

Diagnostic Categories

Other categorical distinctions with respect to school absenteeism have involved attempts at diagnostic groupings. Such groupings often involve anxiety, mood, and disruptive behavior disorders, including some combination of these (Bernstein and Garfinkel, 1986; Last and Strauss, 1990; McShane et al., 2001; Kearney and Albano, 2004). Anxiety- and mood-based categories are sometimes clustered in some youth with school attendance problems, as are oppositional defiant and conduct problems (King et al., 2001). As such, these distinctions are sometimes applied or related to school refusal-truancy or acute-chronic distinctions (Ek and Eriksson, 2013). Prognosis may relate to a degree to specific diagnostic type in this population as well (Layne et al., 2003; McShane et al., 2004).

Diagnostic groupings are appealing to many researchers and clinicians, but considerable diagnostic heterogeneity is a hallmark of youth with school attendance problems (Kearney, 2007; Nayak et al., 2018). In addition, several studies indicate that many youth with school attendance problems have no psychiatric diagnosis at all (Egger et al., 2003; Kearney and Albano, 2004). School attendance problems are not formally listed as psychiatric disorders in most nomenclatures, though aspects of these problems are represented in separation anxiety disorder and conduct disorder (American Psychiatric Association, 2013). As such, diagnostic profiles in this population have not been linked extensively to intervention recommendations.

Summary

Categorical and dichotomous approaches to school attendance problems have a rich scholarly history and have contributed substantially to the conceptualization of this population. In addition, such approaches are well inculcated into many legal statutes, school-based policies, and research frameworks regarding school absenteeism. Key challenges for categorical and dichotomous approaches to school attendance problems include the need to better account for the considerable heterogeneity of this population and to link specific intervention strategies to specific constructs. In addition, these traditional characterizations are becoming challenged in an era of virtual learning, distance-based classrooms, hybrid education, blended education (e.g., high school with community college or vocational training), and other forms of alternative approaches toward graduation or career/adult readiness (see also Part 2 of this review). Categorical and dichotomous approaches to school attendance problems also do not generally focus on promoting school attendance, instead adopting more of a tertiary approach.

DIMENSIONAL APPROACHES

As mentioned earlier, researchers and others have also examined dimensional approaches to SA/A to try to better account for the fluidity, scalability, and complexity of these constructs. These dimensional approaches include a focus on conceptualizing various aspects of SA/A along continua or spectra to more fully capture the heterogeneity, variability, diversity, and mutability of this population. General dimensions to be discussed over the next sections include definition, tiers of prevention/intervention, risk and contextual factors, absenteeism severity, developmental and school levels, and functional profiles.

School Attendance and Its Problems on a Definitional Continuum

One of the most fundamental dimensional approaches to SA/A involves definition itself. This approach involves viewing school attendance and its various associated problems along a spectrum of panels ranging from full presence to complete absence (Figure 1). School attendance, with or without challenges or problems, generally represents the left side of the spectrum and can include attendance with little to no difficulty, early warning signs that may signal later absenteeism, school attendance under considerable



FIGURE 1 | Spectrum of school attendance and its problems.

distress, and morning misbehaviors designed to induce parental acquiescence or other responses that may eventually lead to absence from school (Kearney, 2019). Common early warning signs that may signal later absenteeism include frequent requests to leave the classroom or to contact parents, difficulties attending specialized sections of a school building (e.g., gymnasium, cafeteria), difficulties transitioning from class to class, persistent distress, and sudden changes in grades, completed work, or behavior, among others (Kearney and Graczyk, 2014).

The middle of the spectrum generally represents school attendance mixed with school absenteeism in some form, such as arriving late to school, missing some classes or times of day but not others, and periodic absences during a particular week, including early departures from school (Boylan and Renzulli, 2017). The right side of the spectrum represents complete school absenteeism, typically for an extended period of time in the form of school stayout (including school disengagement) or permanently in the form of school dropout (Iachini et al., 2016). The latter features of the spectrum account as well for the observation from many researchers that leaving school permanently is more of a process than an event (e.g., Ananga, 2011; Wang and Fredricks, 2014; Dupéré et al., 2015).

A key advantage of a dimensional approach to defining SA/A is that it includes the construct of school attendance and captures the full range of possible school attendance problems along a spectrum (Tobias, 2019). The spectrum allows for peri-attendance phenomena that are often fluid and change for a particular child over a certain time period (Chu et al., 2019; Kearney, 2019; Knollmann et al., 2019). For example, Pflug and Schneider (2016) found, among students with absenteeism in the past 7 days, that 35.0% missed a single class or part of a school day, 31.3% missed an entire day, and 33.7% missed 2+ days. In addition, the spectrum can account for the developmental history often surrounding SA/A in particular student, which can deteriorate over time in stages from full attendance to full absence (Henry et al., 2012). The spectrum is also largely atheoretical and may apply to various pathways to school dropout across countries (Lamb et al., 2010).

Such a dimension or spectrum allows for nimble, rapid, and real-time assessment of type of school attendance problem, which must be a priority for implementation models (see Part 2 of this review; Green et al., 2015). The dimension can also apply to variability in absenteeism that can exist between children in a given classroom, between classrooms in the same school, and between schools (Gee, 2019). The dimension also avoids pitfalls often associated with excused and unexcused

absences by focusing more on type of school attendance problems and less on the need to establish the validity of an absence (Kearney and Albano, 2018). The dimension can apply as well to various tiers of SA/A (see “Multi-tiered System of Supports”).

Key drawbacks of the definitional spectrum include its lack of current utility in school districts and research studies, inability to provide information about the etiology or function of a school attendance problem, and lack of association with prevention or intervention protocols for this population (Schildkamp et al., 2016; Balfanz and Byrnes, 2018). Specific, operational definitions for each panel of the spectrum remain needed as well (Kearney, 2016). Others contend that collecting even very basic absenteeism data is challenging enough for many schools, and that basic data may be sufficient for at least determining which students are missing a substantial amount of school (Birioukov, 2016). Still, researchers commonly examine school attendance problems other than full absenteeism, clinicians and others must initially grapple with the exterior complexity of this population, and the spectrum can be a useful heuristic for understanding the full scope of school attendance and its problems across jurisdictions (Keppens and Spruyt, 2017; Kearney, 2019; Wegmann and Smith, 2019).

Multi-tiered System of Supports

As noted earlier, the sheer number of disciplines associated with the study of SA/A has led to a plethora of intervention approaches to address this complicated population. Such approaches range from (1) systemic prevention strategies developed by educators and criminal justice experts to promote school attendance and curb dropout, (2) clinical approaches developed by health professionals to address mental health and other challenges during emerging school absenteeism, (including aspects described in the previous section), and (3) intensive strategies developed by professionals in multiple disciplines to address chronic and severe absenteeism and potential dropout often mixed with substantial, broad contextual factors related to extreme psychopathology, family crises, and school and community variables (Wilson et al., 2011; Freeman and Simonsen, 2015). An advantage of these varied set of approaches is as much a focus on promoting school attendance and preventing school attendance problems as on ameliorating existing cases of school absenteeism (Ekstrand, 2015).

Kearney and Graczyk (2014, see also Kearney, 2016) advocated the use of multi-tiered system of support principles to arrange extant strategies to boost school attendance and to address school absenteeism at different severity and risk/contextual factor levels.

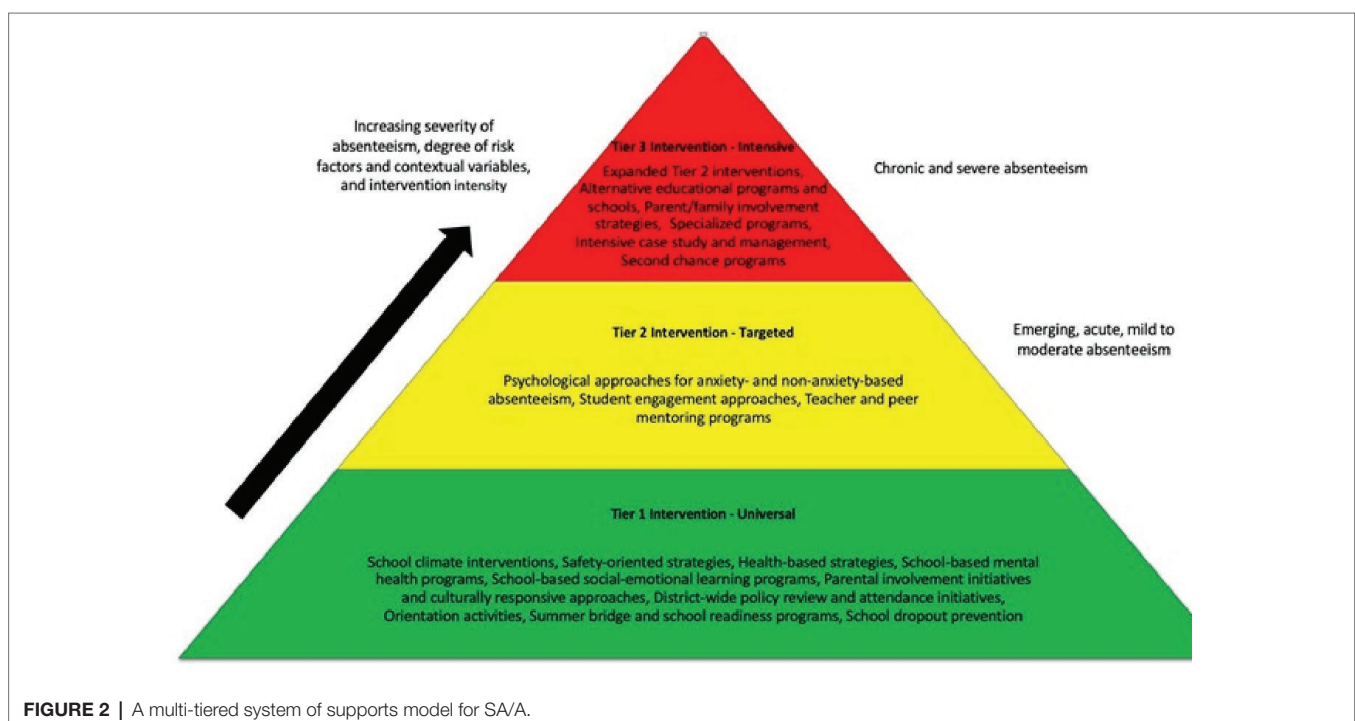
Multi-tiered system of support (MTSS) models have been utilized in education for many years and typically weave the academic focus of Response to Intervention (RtI) models and the behavioral and social focus of positive behavior intervention supports (PBIS) or program-wide positive behavior supports (PWPBS) into one cohesive model to best address all student needs (Sugai and Horner, 2009). An overarching principle of MTSS is to eschew a “wait to fail” mentality and to instead emphasize active monitoring and more immediate intervention (McIntosh and Goodman, 2016). MTSS models thus accentuate prevention, frequent progress monitoring, data-based decision-making and problem-solving, evidence-based interventions, individualized instruction and intervention, and implementation fidelity (Eagle et al., 2015). The comprehensive, empirical, sustainable, and efficient nature of MTSS is designed to optimize limited resources and is thus becoming widely adopted in school settings (McIntosh et al., 2010; August et al., 2018).

MTSS models commonly arrange prevention and intervention strategies for a particular problem (or non-problem) into three tiers: primary or universal (Tier 1), secondary or targeted (Tier 2), and tertiary or intensive (Tier 3) (Stephan et al., 2015; Stoiber and Gettinger, 2016). Tier 1 strategies involve delivering support to all students and are generally designed to promote a positive school culture and prosocial behavior and academic competence and to prevent difficulties in these areas. Tier 2 strategies involve delivering support to a percentage of students who do not respond in some way to Tier 1 strategies but who have less complex concerns. Tier 3 and more individualized strategies involve delivering support to a lesser percentage of students who do not respond in some way to Tier 2 strategies and who have more complex concerns (Rodriguez et al., 2016). The tiers represent a

continuum of evidence-based practices implemented by various teams (Cook et al., 2015; Weist et al., 2018).

Kearney and Graczyk (2014) initially focused on RtI descriptives for arranging strategies that promote school attendance and address school absenteeism, and Kearney (2016) later expanded this line of thinking to broader MTSS descriptives. The essential aspects of each are similar for this population: Tier 1 approaches focus on enhancing functioning and school-wide attendance and on preventing absenteeism for all students, Tier 2 approaches focus on addressing students with emerging, acute, or mild to moderate school absenteeism, and Tier 3 approaches focus on addressing students with chronic and severe school absenteeism (Kearney, 2016, 2019; Fornander and Kearney, submitted). Tiers 2 and 3 would thus include the definitional spectrum discussed in the previous section. Specific preventative-based and clinical and systemic interventions are matched to each tier to help school personnel and others conceptualize approaches to SA/A. **Figure 2** illustrates a sample MTSS model for SA/A prevention/intervention.

An MTSS model for SA/A includes several dimensions designed to enhance inclusivity, flexibility, and adaptability to various disciplines, educational and health structures, and jurisdictions and possibly cultures. These dimensions include severity of absenteeism (e.g., percentage days missed in a given year, length of problem; see previous section), degree of risk or contextual factors present in a particular case (i.e., child, parent, family, peer, school, community), target of prevention/intervention (i.e., all students, some percentage of students, fewer percentage of students), and intensity and breadth level of interventions (e.g., less intense/broad for acute or mild to moderate absenteeism, more intense/broad for chronic and severe absenteeism). At the same time, however, an MTSS model for SA/A is designed to be fairly simple in scope to be more easily adapted to various individual cases



and settings. The model is thus, essentially, a signpost or roadmap to chart available intervention strategies for SA/A.

A full description of preventative and intervention approaches to SA/A is beyond the scope of this article. In general, however, Tier 1 approaches for SA/A can include system-, district-, school-, or even community-wide or state/national approaches to promote school attendance and prevent school absenteeism, often in tandem (e.g., full service community schools; Coffey et al., 2018). These approaches are generally aimed at all students and may include methods to improve school climate and safety, to enhance mental and physical health and social-emotional functioning, to boost parent and family involvement, to reduce school violence and bullying, to review policies that may exacerbate attendance problems, and to implement orientation and readiness programs, among others (see comprehensive summaries by Sutphen et al., 2010; Maynard et al., 2013, 2018; Kearney, 2016). Similarly, school dropout prevention efforts typically focus on school-wide academic enhancement, mentoring and supportive relationships, psychosocial skill development, and effective classroom behavior management (Ecker-Lyster and Niileksela, 2016). Many of these Tier 1 approaches have been shown to improve school attendance rates, and reduce school dropout rates, either directly or indirectly (e.g., Havik et al., 2015; Freeman et al., 2016; Taylor et al., 2017).

Tier 2 approaches for SA/A can include child-, parent-, and family-based interventions for cases of emerging, acute, or mild to moderate school absenteeism severity. These approaches are generally aimed at the percentage of all students/families who display these problems and may include the many psychological and psychiatric interventions designed for this population as well as approaches to enhance individual student engagement and school connectedness (Estell and Perdue, 2013; Maynard et al., 2013, 2018; Kearney, 2019). Mentoring and monitoring approaches may be relevant in this regard as well (Guryan et al., 2017). Many of these Tier 2 approaches can be and have been adapted as well for more severe cases of school absenteeism (i.e., Tier 3) (Heyne et al., 2002), but many Tier 2 approaches tend to work better for cases of less severe absenteeism with fewer complicating factors (Kearney, 2016).

Tier 3 approaches for SA/A can include various system-wide school-community partnerships as well as individual approaches to address cases of chronic and severe absenteeism (Kim and Streeter, 2016). These partnerships and approaches are generally aimed at the smaller percentage of all students/families who display these problems and may include alternative educational placements and opportunities, individualized efforts to re-engage parents and family members in the educational/attendance process, and specialized programs for youth with extreme psychopathology (Flower et al., 2011; Hahn et al., 2015; Kearney, 2016). A key aspect of many Tier 3 approaches to SA/A for secondary students is to focus not so much on traditional in-seat class time and formal credit accrual as much as on flexible avenues that blur the end of high school and the beginning of adult or career readiness paths such as community college, vocational training, or technical certification (Dougherty and Lombardi, 2016). As such, many approaches for this population focus more on demonstration of competencies than on traditional metrics such as grades (Castellano et al., 2017).

An MTSS approach to SA/A remains in development and will likely need to evolve in conjunction with related progressions in the field. For example, some have advocated for moving beyond one-dimensional triangle representations of MTSS to more multifaceted pyramids, with each side of the pyramid addressing a different type of student (Dulaney et al., 2013) (see Part 2 of this review). Kearney (2016) also discussed the idea of a “Tier 4” for youth with extreme psychopathology and the need for inpatient/residential treatment mixed with education. How an MTSS approach for SA/A fits with related approaches focused on academic, behavioral, and social constructs also remains to be seen, especially given that absenteeism rates in some schools (and thus entry into Tiers 2 and 3) are overwhelming (Balfanz et al., 2014).

Still, schools that implement MTSS with higher fidelity have less school absenteeism than schools that implement with less fidelity (Freeman et al., 2016). School districts may also include attendance measures in MTSS models (Coffey et al., 2018). Others have also begun to utilize a general tiered framework to place their studies and interventions in this context (e.g., Skedgell and Kearney, 2018; Brouwer-Borghuis et al., 2019; Elliott and Place, 2019; Ingul et al., 2019). For example, Cook et al. (2017) evaluated a comprehensive program to reduce school attendance problems that included components of each tier of intervention. Tier 1 involved facilitating communication between teachers and parents *via* home visits and mobile telephone contact, Tier 2 involved attendance data monitoring and teacher intervention with students beginning to accrue excessive absences, and Tier 3 involved referrals to specialists for students with chronic absenteeism. A multidimensional MTSS framework will comprise a key piece for reconciling SA/A approaches in Part 2 of this review.

Risk/Contextual Factors, Absenteeism Severity, and Developmental Level

As mentioned, key dimensions of an MTSS model of SA/A involve risk and contextual factors, which are generally expected to accrue by tier in conjunction with greater absenteeism severity. Researchers commonly group risk or contextual (and, conversely, protective) factors for SA/A into various categories that include child-, parent-, family-, peer-, school-, and community-based variables (Kearney, 2008; Zaff et al., 2017; Gubbels et al., 2019). Others have argued that broader societal or cultural variables also impact school attendance problems, including zero tolerance-based legal statutes, assimilation and language barriers, and immigration issues, among others (Casoli-Reardon et al., 2012). Categories of risk and contextual factors for SA/A are sometimes studied singularly (e.g., Hendron and Kearney, 2016), though many recent approaches have utilized more sophisticated multilevel modeling and related statistical procedures to examine these categories collectively (Dembo et al., 2016; Van Eck et al., 2017; Ramberg et al., 2019). An accumulation of risk/contextual factors appears to exacerbate risk of school attendance problems (Catalano et al., 2012; Ingul et al., 2019) and thus may be more evident in Tier 3 than Tier 2 cases (Vaughn et al., 2013).

Similarly, absenteeism severity is an important dimension of an MTSS model of SA/A and can be generally measured as percentage days missed from school in a given academic year (Fornander and Kearney, submitted). However, this dimension can also be more broadly conceptualized as developmental history of a child's SA/A across multiple academic years (Veenstra et al., 2010). Risk and contextual factors as well as absenteeism severity can also change along a continuum of developmental and school levels (Skedgell and Kearney, 2018). Risk factors for school absenteeism can manifest quite differently across primary, early secondary, and later secondary grades (Suh and Suh, 2007). In addition, absenteeism severity rates in schools tend to spike in kindergarten and first grade, decline during elementary school years, spike again in middle school, and continue to increase through high school, peaking at 12th grade (Balfanz and Byrnes, 2012).

Functional Profiles of School Attendance Problems

Many schools and school-based professionals that utilize tiered frameworks for academic, behavioral, and social issues also rely heavily on functional analysis and functional behavioral assessment practices to provide individualized student support (Simonsen and Sugai, 2013; McCurdy et al., 2016). At Tier 1, this may include a focus on school-wide antecedents or predictors of problem behavior, delineating appropriate and nuanced consequences for a behavior depending on its function and severity, and adjusting expectations across contexts and personnel (Crone et al., 2015). At Tier 2, this may include selecting and monitoring social and behavioral interventions for students on the basis of the function of their behavior (Reinke et al., 2013). At Tier 3, this may include a more detailed assessment of multiple functions and replacement behaviors as well as more complex environmental change (Scott and Cooper, 2013).

Kearney and colleagues (e.g., Kearney and Silverman, 1996; Kearney and Graczyk, 2014; Gonzalez et al., 2019) developed various aspects of a functional model of school attendance problems designed to apply particularly to school refusal behavior (i.e., child-initiated school attendance problems). This model focuses on key variables or functions that serve to maintain or reinforce school attendance problems and was designed primarily as a clinical approach for Tier 2-type school attendance problems. The postulated primary functions in the model include refusal to attend school to (1) avoid school-based stimuli that provoke a general sense of negative affectivity (i.e., aspects of both anxiety and depression), (2) escape aversive social and/or evaluative situations at school, (3) seek attention from significant others such as parents, and/or (4) pursue tangible rewards outside of school such as time with friends.

The first two functions refer to school refusal behavior maintained by negative reinforcement, whereas the latter two functions refer to school refusal behavior maintained by positive reinforcement. A profile of the relative strength of each functional condition is generally recommended during case analysis (Kearney, 2019). A key advantage of the functional model is its clear linkage to specific prescriptive treatment packages that include child-, parent-, and family-based interventions as well

as Tier 3 interventions as needed (Kearney and Albano, 2018). The treatment packages are also designed to be flexible enough to be adapted to a variety of cases and locations, and indeed have been across educational, mental health, and medical settings (e.g., Tolin et al., 2009; Rohrig and Puliafico, 2018; Hannan et al., 2019; Thastum et al., 2019).

Another key aspect of the functional model is its amenability to support the study of various dimensions or profiles of youth with school attendance problems. Researchers have demonstrated across numerous studies that functions of school refusal behavior relate to different patterns of depression, anticipatory and school-based performance anxiety, stress, positive/negative affect, sleep problems, and social functioning (e.g., Kearney, 2002; Richards and Hadwin, 2011; Hochadel et al., 2014; Fernández-Sogorb et al., 2018; González et al., 2018; Sanmartín et al., 2018; Gonzalez et al., 2019). Others have related the functions to clusters of absentee youth (Gallé-Tessonneau et al., 2019) and family environment types (Kearney and Silverman, 1995). In addition, functions of school refusal behavior may be superior to forms of behavior in predicting absenteeism severity (Kearney, 2007).

A functional model of school refusal behavior does carry limitations, however. As noted, the model is meant to apply primarily to Tier 2 (and perhaps to early warning signs evident in Tier 1) school refusal behavior and thus less to more chronic and severe school absenteeism or to cases primarily initiated by other entities (Kearney, 2016). In addition, the model is not necessarily applicable to all countries and cultures, though many have found analogous features in their locales (e.g., Brandibas et al., 2004; Kim, 2010; Secer, 2014). In addition, some erroneously conflate specific assessment devices constructed to assist the functional model with the broader model itself, which is supposed to be based on a comprehensive analysis of maintaining variables (Kearney and Tillotson, 1998).

Summary

Dimensionally oriented approaches to SA/A may help account for the considerable heterogeneity of this population by capturing a wide range of attendance/absenteeism expressions, prevention and intervention strategies, risk/contextual factors, absenteeism severity and developmental levels, and functional profiles of key maintaining factors. Dimensional approaches do consider school attendance as much as absenteeism and are helpful in informing treatment approaches for SA/A. As with categorical approaches, however, considerable barriers exist to implementing dimensional approaches in schools and other pertinent settings. In addition, dimensional approaches to SA/A will also have to adapt to rapid advancements in education and technology in future years.

GENERAL SUMMARY

The plethora of conceptual approaches to SA/A is certainly a phenomenon worth celebrating. Researchers, educators, clinicians, and stakeholders such as parents have contributed immensely to the study and understanding of this complex population. Such study has involved definitions, classification systems, assessment protocols, and intervention strategies designed, in the end, to

help children and adolescents attend school and to achieve better outcomes in adulthood. We salute all of those who have dedicated their time and careers to improving the lives of these students.

Part 1 of this two-part review concentrated on a broad classification and description of contemporary approaches to SA/A along categorical and dimensional orientations. Each orientation carries distinct advantages and disadvantages, a not uncommon circumstance across various problems and disorders that affect youth. Though meant to be comprehensive, this review focused on the primary methods of differentiating school attendance problems. Many nuanced distinctions based on multilevel and other statistical modeling should be noted, and many special circumstances such as intense school violence or extreme poverty likely override the distinctions mentioned here. In addition, prevention and intervention were not a primary focus of this part of the review, but are explored in greater depth in the second part of this review.

As suggested by several scholars, adopting both categorical and dimensional approaches to the study of complex and heterogeneous phenomena may be advisable. Such a juxtaposition has the potential advantage of identifying general categorical

rules and cut-points for distinguishing broad groups of behavior as well as specific dimensions that are useful for providing data to adjust these cut-points along various spectra. Part 2 of this two-part review thus focuses on a possible pathway toward reconciling contemporary categorical and dimensional approaches to SA/A in this manner. This pathway also represents a heuristic framework as the field of SA/A grapples with challenges to dissemination and implementation as well as future changes in education and technology.

AUTHOR CONTRIBUTIONS

CK, CG, PG, and MF contributed to the writing and editing of the manuscript.

FUNDING

This work was supported by the UNLV College of Liberal Arts and Lied Library.

REFERENCES

- Allison, M. A., and Attisha, E. (2019). The link between school attendance and good health. *Pediatrics* 143:e20183648. doi: 10.1542/peds.2018-3648
- Allman, K. L., and Slate, J. R. (2011). School discipline in public education: a brief review of current practices. *Int. J. Leadership Educ.* 6, 1–8.
- American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders (DSM-5)*. Washington, DC: American Psychiatric Publication.
- Ananga, E. D. (2011). Typology of school dropout: the dimensions and dynamics of dropout in Ghana. *Int. J. Educ. Dev.* 31, 374–381. doi: 10.1016/j.ijeducdev.2011.01.006
- Anderson, V. R., Barnes, A. R., Campbell, N. A., Campbell, C. A., Onifade, E., and Davidson, W. S. (2016). Gender and adolescents' risk for recidivism in truancy court. *J. Juv. Justice* 5, 93–110. doi: 10.1037/e571212013-437
- Arora, P. G., Connors, E. H., George, M. W., Lyon, A. R., Wolk, C. B., and Weist, M. D. (2016). Advancing evidence-based assessment in school mental health: key priorities for an applied research agenda. *Clin. Child. Fam. Psychol. Rev.* 19, 271–284. doi: 10.1007/s10567-016-0217-y
- Atkinson, L., Quarrington, B., Cyr, J. J., and Atkinson, F. V. (1989). Differential classification in school refusal. *Br. J. Psychiatry* 155, 191–195. doi: 10.1192/bjp.155.2.191
- August, G. J., Piehler, T. F., and Miller, F. G. (2018). Getting “SMART” about implementing multi-tiered systems of support to promote school mental health. *J. Sch. Psychol.* 66, 85–96. doi: 10.1016/j.jsp.2017.10.001
- Baier, D. (2016). The school as an influencing factor of truancy. *Int J Criminol Sociol* 5, 191–202. doi: 10.6000/1929-4409.2016.05.18
- Baker, D., and Jansen, J. (2000). Using groups to reduce elementary school absenteeism. *Child. Sch.* 22, 46–53. doi: 10.1093/cs/22.1.46
- Baker, H., and Wills, U. (1978). School phobia: classification and treatment. *Br. J. Psychiatry* 132, 492–499. doi: 10.1192/bjp.132.5.492
- Balfanz, R. (2016). Missing school matters. *Phi Delta Kappa Int.* 98, 8–13. doi: 10.1177/0031721716671898
- Balfanz, R., Bridgeland, J. M., Fox, J. H., DePaoli, J. L., Ingram, E. S., and Maushard, M. (2014). *Building a grad nation: Progress and challenge in ending the high school dropout epidemic*. Washington, DC: Civic Enterprises. Annual Update 2014.
- Balfanz, R., and Byrnes, V. (2012). The importance of being in school: a report on absenteeism in the nation's public schools. *Educ. Dig.* 78, 1–45.
- Balfanz, R., and Byrnes, V. (2018). Using data and the human touch: evaluating the NYC inter-agency campaign to reduce chronic absenteeism. *J. Educ. Stud. Placed Risk* 23, 107–121. doi: 10.1080/10824669.2018.1435283
- Berendes, D., Andujar, A., Barrios, L. C., and Hill, V. (2019). Associations among school absenteeism, gastrointestinal and respiratory illness, and income — United States, 2010–2016. *MMWR Morb. Mortal. Wkly Rep.* 68, 209–213. doi: 10.15585/mmwr.mm6809a1
- Berg, I. (1997). School refusal and truancy. *Arch. Dis. Child.* 76, 90–91. doi: 10.1136/ad.76.2.90
- Berg, I., Casswell, G., Goodwin, A., Hullin, R., McGuire, R., and Tagg, G. (1985). Classification of severe school attendance problems. *Psychol. Med.* 15, 157–165. doi: 10.1017/S0033291700021024
- Bernstein, G. A., and Garfinkel, B. D. (1986). School phobia: the overlap of affective and anxiety disorders. *J. Am. Acad. Child Adolesc. Psychiatry* 25, 235–241. doi: 10.1016/s0002-7138(09)60231-4
- Birioukov, A. (2016). Beyond the excused/unexcused absence binary: classifying absenteeism through a voluntary/involuntary absence framework. *Educ. Rev.* 68, 340–357. doi: 10.1080/00131911.2015.1090400
- Bobakova, D., Geckova, A. M., Klein, D., van Dijk, J. P., and Reijneveld, S. A. (2015). Fighting, truancy and low academic achievement in youth subcultures. *Young* 23, 357–372. doi: 10.1177/1103308815596905
- Bools, C., Foster, J., Brown, I., and Berg, I. (1990). The identification of psychiatric disorders in children who fail to attend school: a cluster analysis of a non-clinical population. *Psychol. Med.* 20, 171–181. doi: 10.1017/S0033291700013350
- Boylan, R. L., and Renzulli, L. (2017). Routes and reasons out, paths back: the influence of push and pull reasons for leaving school on students' school reengagement. *Youth Soc.* 49, 46–71. doi: 10.1177/0044118x14522078
- Brandibas, G., Jeunier, B., Clanet, C., and Fourasté, R. (2004). Truancy, school refusal and anxiety. *Sch. Psychol. Int.* 25, 117–126. doi: 10.1177/0143034304036299
- Bridgeland, J. M., Dilulio, J. J., and Morison, K. B. (2006). *Perspectives of high school dropouts*. Washington, D.C. Available at: <https://docs.gatesfoundation.org/documents/thesilentepidemic3-06final.pdf>
- Brouwer-Borghuis, M. L., Heyne, D., Sauter, F. M., and Scholte, R. H. (2019). The link: an alternative educational program in the Netherlands to reengage school-refusing adolescents with schooling. *Cogn. Behav. Pract.* 26, 75–91. doi: 10.1016/j.cbpra.2018.08.001
- Brunello, G., and De Paola, M. (2014). The costs of early school leaving in Europe. *IZA J. Lab. Policy* 3, 1–31. doi: 10.1186/2193-9004-3-22
- Burdick-Will, J., Stein, M. L., and Grigg, J. (2019). Danger on the way to school: exposure to violent crime, public transportation, and absenteeism. *Soc. Sci.* 6, 118–142. doi: 10.15195/v6.a5
- Burton, C. M., Marshal, M. P., and Chisolm, D. J. (2014). School absenteeism and mental health among sexual minority youth and heterosexual youth. *J. Sch. Psychol.* 52, 37–47. doi: 10.1016/j.jsp.2013.12.001

- Campbell, D., and Wright, J. (2005). Rethinking welfare school-attendance policies. *Soc. Serv. Rev.* 79, 2–28. doi: 10.1086/426716
- Casoli-Reardon, M., Rappaport, N., Kulick, D., and Reinfeld, S. (2012). Ending school avoidance. *Educ. Leadersh.* 70, 50–55.
- Castellano, M., Ewart Sundell, K., and Richardson, G. B. (2017). Achievement outcomes among high school graduates in college and career readiness programs of study. *Peabody J. Educ.* 92, 254–274. doi: 10.1080/0161956X.2017.1302220
- Catalano, R. F., Fagan, A. A., Gavin, L. E., Greenberg, M. T., Irwin, C. E., Ross, D. A., et al. (2012). Worldwide application of prevention science in adolescent health. *Lancet* 379, 1653–1664. doi: 10.1016/S0140-6736(12)60238-4
- Chen, C. C., Culhane, D. P., Metraux, S., Park, J. M., and Venable, J. C. (2016). The heterogeneity of truancy among urban middle school students: a latent class growth analysis. *J. Child Fam. Stud.* 25, 1066–1075. doi: 10.1007/s10826-015-0295-3
- Christenson, S. L., and Thurlow, M. L. (2004). School dropouts: prevention considerations, interventions, and challenges. *Curr. Dir. Psychol. Sci.* 13, 36–39. doi: 10.1111/j.0963-7214.2004.01301010.x53
- Chu, B. C., Guarino, D., Mele, C., O'Connell, J., and Coto, P. (2019). Developing an online early detection system for school attendance problems: results from a research-community partnership. *Cognit. Behav. Pract.* 26, 35–45. doi: 10.1016/j.cbpra.2018.09.001
- Coffey, S. E., Stallworth, L., Majors, T., Higgs, K., Gloster, L., Carter, Y., et al. (2018). Using the cluster support team and multi-tiered systems of support to provide wraparound services in a large urban school district. *National Youth-At-Risk Conference Savannah*. 18. Available at: https://digitalcommons.georgiasouthern.edu/nyar_savannah/2018/2018/18
- Coghill, D., and Sonuga-Barke, E. J. S. (2012). Annual research review: categories versus dimensions in the classification and conceptualisation of child and adolescent mental disorders - implications of recent empirical study. *J. Child Psychol. Psychiatry* 53, 469–489. doi: 10.1111/j.1469-7610.2011.02511.x
- Conry, J. M., and Richards, M. P. (2018). The severity of state truancy policies and chronic absenteeism. *J. Educ. Stud. Placed Risk* 23, 187–203. doi: 10.1080/10824669.2018.1439752
- Cook, C. R., Lyon, A. R., Kuberovic, D., Wright, D. B., and Zhang, Y. (2015). A supportive beliefs intervention to facilitate the implementation of evidence-based practices within a multi-tiered system of supports. *Sch. Ment. Heal.* 7, 49–60. doi: 10.1007/s12310-014-9139-3
- Cook, P. J., Dodge, K. A., Gifford, E. J., and Schulting, A. B. (2017). A new program to prevent primary school absenteeism: results of a pilot study in five schools. *Child. Youth Serv. Rev.* 82, 262–270. doi: 10.1016/j.childyouth.2017.09.017
- Cooper, M. (1986). A model of persistent school absenteeism. *Educ. Res.* 28, 14–20. doi: 10.1080/0013188860280102
- Cramer, E. D., Gonzalez, L., and Pellegrini-Lafont, C. (2014). From classmates to inmates: an integrated approach to break the school-to-prison pipeline. *Equity Excell. Educ.* 47, 461–475. doi: 10.1080/10665684.2014.958962
- Crone, D. A., Hawken, L. S., and Horner, R. H. (2015). *Building positive behavior support systems in schools: Functional behavioral assessment*. New York: Guilford Publications.
- Curran, F. C. (2016). Estimating the effect of state zero tolerance laws on exclusionary discipline, racial discipline gaps, and student behavior. *Educ. Eval. Policy Anal.* 38, 647–668. doi: 10.3102/0162373716652728
- Dahl, P. (2016). Factors associated with truancy: emerging adults' recollections of skipping school. *J. Adolesc. Res.* 31, 119–138. doi: 10.1177/0743558415587324
- Daniels, H., and Cole, T. (2010). Exclusion from school: short-term setback or a long term of difficulties? *Eur. J. Spec. Needs Educ.* 25, 115–130. doi: 10.1080/08856251003658652
- Darling-Hammond, L., Wilhoit, G., and Pittenger, L. (2014). Accountability for college and career readiness: developing a new paradigm. *Educ. Policy Anal. Arch.* 22, 1–34. doi: 10.14507/epaa.v22n86.2014
- De Boeck, P., Wilson, M., and Acton, G. S. (2005). A conceptual and psychometric framework for distinguishing categories and dimensions. *Psychol. Rev.* 112, 129–158. doi: 10.1037/0033-295X.112.1.129
- Dembo, R., Wareham, J., Schmeidler, J., and Winters, K. C. (2016). Exploratory two-level analysis of individual-and school-level factors on truant youth emotional/psychological functioning. *Am. Educ. Res. J.* 109, 596–607. doi: 10.1080/00220671.2014.1002881
- DePaoli, J. L., Balfanz, R., Atwell, M. N., and Bridgeland, J. (2018). *Building a grad nation: Progress and challenge in raising high school graduation rates*. Washington, D.C.: Civic Enterprises. Available at: http://new.every1graduates.org/wp-content/uploads/2018/06/18930_Civic_BGN_v7.pdf
- DiBartolo, C. A., and Braun, M. K. (eds.) (2017). “School refusal” in *Pediatrician's guide to discussing research with patients*. (New York: Springer International Publishing), 225–238.
- Dougherty, S. M., and Lombardi, A. R. (2016). From vocational education to career readiness: the ongoing work of linking education and the labor market. *Rev. Educ. Res.* 40, 326–355. doi: 10.3102/0091732x16678602
- Dube, S. R., and Orpinas, P. (2009). Understanding excessive school absenteeism as school refusal behavior. *Child. Sch.* 31, 87–95. doi: 10.1093/cs/31.2.87
- Dulaney, S. K., Hallam, P. R., and Wall, G. (2013). Superintendent perceptions of multi-tiered systems of support (MTSS): obstacles and opportunities for school system reform. *AASA J. Scholarship Pract.* 10, 30–45.
- Dupéré, V., Leventhal, T., Dion, E., Crosnoe, R., Archambault, I., and Janosz, M. (2015). Stressors and turning points in high school and dropout: a stress process, life course framework. *Rev. Educ. Res.* 85, 591–629. doi: 10.3102/0034654314559845
- Eagle, J. W., Dowd-Eagle, S. E., Snyder, A., and Holtzman, E. G. (2015). Implementing a multi-tiered system of support (MTSS): collaboration between school psychologists and administrators to promote systems-level change. *J. Educ. Psychol. Consult.* 25, 160–177. doi: 10.1080/10474412.2014.929960
- Eaton, D. K., Kann, L., Kinchen, S., Shanklin, S., Ross, J., Hawkins, J., et al. (2008). Youth risk behavior surveillance—United States, 2007. *MMWR Morb. Mortal. Wkly Rep.* 57, 1–131.
- Ecker-Lyster, M., and Niileksela, C. (2016). Keeping students on track to graduate: a synthesis of school dropout trends, prevention, and intervention initiatives. *J. At-Risk Issues* 19, 24–31.
- Egger, M., Juni, P., Bartlett, C., Holenstein, F., and Sterne, J. (2003). How important are comprehensive literature searches and the assessment of trial quality in systematic reviews? Empirical study. *Health Technol. Assess.* 7, 1–76.
- Ek, H., and Eriksson, R. (2013). Psychological factors behind truancy, school phobia, and school refusal: a literature study. *Child Fam. Behav. Ther.* 35, 228–248. doi: 10.1080/07317107.2013.818899
- Ekstrand, B. (2015). What it takes to keep children in school: a research review. *Educ. Rev.* 67, 459–482. doi: 10.1080/00131911.2015.1008406
- Elliot, A. J. (1999). Approach and avoidance motivation and achievement goals. *Educ. Psychol.* 34, 169–189. doi: 10.1207/s15326985ep3403_3
- Elliott, J. G., and Place, M. (2019). School refusal: developments in conceptualisation and treatment since 2000. *J. Child Psychol. Psychiatry* 60, 4–15. doi: 10.1111/jcpp.12848
- Emerson, N. D., Distelberg, B., Morrell, H. E. R., Williams-Reade, J., Tapanes, D., and Montgomery, S. (2016). Quality of life and school absenteeism in children with chronic illness. *J. Sch. Nurs.* 32, 258–266. doi: 10.1177/1059840515615401
- Estell, D. B., and Perdue, N. H. (2013). Social support and behavioral and affective school engagement: the effects of peers, parents, and teachers. *Psychol. Sch.* 50, 325–339. doi: 10.1002/pits.21681
- Evans, E. M. (2000). The emergence of beliefs about the origins of species in school-age children. *Merrill-Palmer Q.* 46, 221–254.
- Fernández-Sogorb, A., Inglés, C. J., Sanmartín, R., González, C., and Vicent, M. (2018). Validation of the visual analogue scale for anxiety-revised and school refusal across anxiety profiles. *Int. J. Clin. Health Psychol.* 18, 264–272. doi: 10.1016/j.ijchp.2018.07.002
- Finning, K., Moore, D., Ukoumunne, O. C., Danielsson-Waters, E., and Ford, T. (2018). The association between child and adolescent emotional disorder and poor attendance at school: a systematic review protocol. *Syst. Rev.* 6, 928–938. doi: 10.1186/s13643-017-0523-6
- Finning, K., Ukoumunne, O. C., Ford, T., Danielsson-Waters, E., Shaw, L., Romero De Jager, I., et al. (2019). Review: the association between anxiety and poor attendance at school – a systematic review. *Child Adolesc. Ment. Health* 24, 205–216. doi: 10.1111/camh.12322
- Flaherty, C. W., Sutphen, R. D., and Ely, G. E. (2012). Examining substance abuse in truant youths and their caregivers: implications for truancy intervention. *Child. Sch.* 34, 201–211. doi: 10.1093/cs/cds008
- Flower, A., McDaniel, S. C., and Jolivette, K. (2011). A literature review of research quality and effective practices in alternative education settings. *Educ. Treat. Child.* 34, 489–510. doi: 10.1353/etc.2011.0038
- Freeman, J., and Simonsen, B. (2015). Examining the impact of policy and practice interventions on high school dropout and school completion rates: a systematic review of the literature. *Rev. Educ. Res.* 85, 205–248. doi: 10.3102/0034654314554431

- Freeman, J., Simonsen, B., McCoach, D. B., Sugai, G., Lombardi, A., and Horner, R. (2016). Relationship between school-wide positive behavior interventions and supports and academic, attendance, and behavior outcomes in high schools. *J. Posit. Behav. Interv.* 18, 41–51. doi: 10.1177/1098300715580992
- Freudenberg, N., and Ruglis, J. (2007). Reframing school dropout as a public health issue. *Prev. Chronic Dis.* 4:A107.
- Gallé-Tessonneau, M., Johnsen, D. B., and Keppens, G. (2019). The relationship between mental health and school absenteeism in a community sample of French secondary school students: four profiles derived from cluster analysis. *Eur. J. Educ.* 12, 77–90. doi: 10.30552/ejep.v12i1.242
- Gee, K. A. (2019). “Variation in chronic absenteeism: the role of children, classrooms, and schools” in *Absent from school: Understanding and addressing student absenteeism*. eds. M. A. Gottfried, and E. L. Hutt (Cambridge, MA: Harvard Education Press), 35–51.
- Gentle-Genitty, C., Karikari, I., Chen, H., Wilka, E., and Kim, J. (2015). Truancy: a look at definitions in the USA and other territories. *Educ. Stud.* 41, 62–90. doi: 10.1080/03055698.2014.955734
- Gleich-Bope, D. (2014). Truancy laws: how are they affecting our legal systems, our schools, and the students involved? *Clearing House: J. Educ. Strategies Issues Ideas* 87, 110–114. doi: 10.1080/00098655.2014.891885
- Gonzalez, C., Ingles, C. J., Kearney, C. A., Sanmartin, R., Vicent, M., and Garcia-Fernandez, J. M. (2019). Relationship between school refusal behavior and social functioning: a cluster analysis approach. *Eur. J. Educ. Psychol.* 12, 17–29. doi: 10.30552/ejep.v12i1.238
- González, C., Kearney, C. A., Lagos-San Martín, N., Sanmartín, R., Vicent, M., Inglés, C. J., et al. (2018). School refusal assessment scale-revised chilean version: factorial invariance and latent means differences across gender and age. *J. Psychoeduc. Assess.* 36, 835–843. doi: 10.1177/0734282917712173
- Gottfried, M. A. (2009). Excused versus unexcused: how student absences in elementary school affect academic achievement. *Educ. Eval. Policy Anal.* 31, 392–415. doi: 10.3102/0162373709342467
- Gottfried, M. A. (2017). Linking getting to school with going to school. *Educ. Eval. Policy Anal.* 39, 571–592. doi: 10.3102/0162373717699472
- Green, C. A., Duan, N., Gibbons, R. D., Hoagwood, K. E., Palinkas, L. A., and Wisdom, J. P. (2015). Approaches to mixed methods dissemination and implementation research: methods, strengths, caveats, and opportunities. *Adm. Policy Ment. Health* 42, 508–523. doi: 10.1007/s10488-014-0552-6
- Gregory, A., Huang, F. L., Anyon, Y., Greer, E., and Downing, B. (2018). An examination of restorative interventions and racial equity in out-of-school suspensions. *Sch. Psychol. Rev.* 47, 167–182. doi: 10.17105/SPR-2017-0073.V47-2
- Gubbels, J., van der Put, C. E., and Assink, M. (2019). Risk factors for school absenteeism and dropout: a meta-analytic review. *J. Youth Adolesc.* 48, 1637–1667. doi: 10.1007/s10964-019-01072-5
- Guryan, J., Christenson, S., Claessens, A., Engel, M., Lai, I., Ludwig, J., et al. (2017). “The effect of mentoring on school attendance and academic outcomes: A randomized evaluation of the check & connect program” in *Institute for Policy Research Working Paper Series, WP-16-18*. (Evanston, IL: Northwestern University). Available at: <http://www.ipr.northwestern.edu/publications/docs/workingpapers/2016/WP-16-18.pdf>
- Hahn, R. A., Knopf, J. A., Wilson, S. J., Truman, B. I., Milstein, B., Johnson, R. L., et al. (2015). Programs to increase high school completion: a community guide systematic health equity review. *Am. J. Prev. Med.* 48, 599–608. doi: 10.1016/j.amepre.2014.12.005
- Haight, C. M., Chapman, G. V., Hendron, M., Loftis, R., and Kearney, C. A. (2014). Evaluation of a truancy diversion program at nine at-risk middle schools. *Psychol. Sch.* 51, 779–787. doi: 10.1002/pits.21775
- Hannan, S., Davis, E., Morrison, S., Gueorgieva, R., and Tolin, D. F. (2019). An open trial of intensive cognitive-behavioral therapy for school refusal. *Evid.-Based Pract. Child Adolesc. Ment. Health* 4, 1–13. doi: 10.1080/23794925.2019.1575706
- Haslam, N., Holland, E., and Kuppens, P. (2012). Categories versus dimensions in personality and psychopathology: a quantitative review of taxometric research. *Psychol. Med.* 42, 903–920. doi: 10.1017/S0033291711001966
- Havik, T., Bru, E., and Ertesvåg, S. K. (2015). Assessing reasons for school non-attendance. *Scand. J. Educ. Res.* 59, 316–336. doi: 10.1080/00313831.2014.904424
- Hendron, M., and Kearney, C. A. (2016). School climate and student absenteeism and internalizing and externalizing behavioral problems. *Child. Sch.* 38, 109–116. doi: 10.1093/cs/cdw009
- Henry, K. L., and Huizinga, D. H. (2007). Truancy's effect on the onset of drug use among urban adolescents placed at risk. *J. Adolesc. Health* 40, 505–519. doi: 10.1016/j.jadohealth.2006.11.138
- Henry, K. L., Knight, K. E., and Thornberry, T. P. (2012). School disengagement as a predictor of dropout, delinquency, and problem substance use during adolescence and early adulthood. *J. Youth Adolesc.* 41, 156–166. doi: 10.1007/s10964-011-9665-3
- Hersov, L. (1985). “School refusal” in *Child and adolescent psychiatry: Modern approaches*. eds. M. Rutter, and L. Hersov (Boston: Blackwell Scientific Publications), 382–399.
- Heyne, D., Gren-Landell, M., Melvin, G., and Gentle-Genitty, C. (2019). Differentiation between school attendance problems: why and how? *Cogn. Behav. Pract.* 26, 8–34. doi: 10.1016/j.cbpra.2018.03.006
- Heyne, D., King, N. J., Tonge, B. J., Rollings, S., Young, D., Pritchard, M., et al. (2002). Evaluation of child therapy and caregiver training in the treatment of school refusal. *J. Am. Acad. Child Adolesc. Psychiatry* 41, 687–695. doi: 10.1097/00004583-200206000-00008
- Hibbett, A., and Fogelman, K. (1990). Future lives of truants: family formation and health-related behaviour. *Br. J. Educ. Psychol.* 60, 171–179. doi: 10.1111/j.2044-8279.1990.tb00934.x
- Hochadel, J., Frölich, J., Wiater, A., Lehmkuhl, G., and Fricke-Oerkermann, L. (2014). Prevalence of sleep problems and relationship between sleep problems and school refusal behavior in school-aged children in children's and parents' ratings. *Psychopathology* 47, 119–126. doi: 10.1159/000345403
- Holtes, M., Bannink, R., Joosten-van Zwanenburg, E., Raat, H., and Broeren, S. (2015). Associations of truancy, perceived school performance, and mental health with alcohol consumption among adolescents. *J. Sch. Health* 85, 852–860. doi: 10.1111/josh.12341
- Hough, H. (2019). “Roll call: describing chronically absent students, the schools they attend, and implications for accountability” in *Absent from school: Understanding and addressing student absenteeism*. eds. M. A. Gottfried, and E. L. Hutt (Cambridge, MA: Harvard Education Press), 15–33.
- Hsu, J., Qin, X., Beavers, S. F., and Mirabelli, M. C. (2016). Asthma-related school absenteeism, morbidity, and modifiable factors. *Am. J. Prev. Med.* 51, 23–32. doi: 10.1016/j.amepre.2015.12.012
- Hutzell, K. L., and Payne, A. A. (2012). The impact of bullying victimization on school avoidance. *Youth Violence Juvenile Justice* 10, 370–385. doi: 10.1177/1541204012438926
- Iachini, A. L., Petiwal, A. F., and DeHart, D. D. (2016). Examining adverse childhood experiences among students repeating the ninth grade: implications for school dropout prevention. *Child. Sch.* 38, 218–227. doi: 10.1093/cs/cdw029
- Inglés, C. J., González-Maciá, C., García-Fernández, J. M., Vicent, M., and Martínez-Monteaudo, M. C. (2015). Current status of research on school refusal. *Eur. J. Dev. Psychol.* 8, 37–52. doi: 10.1016/j.ejeps.2015.10.005
- Ingul, J. M., Havik, T., and Heyne, D. (2019). Emerging school refusal: a school-based framework for identifying early signs and risk factors. *Cognit. Behav. Pract.* 26, 46–62. doi: 10.1016/j.cbpra.2018.03.005
- Kahn, J. H., and Nursten, J. P. (1962). School refusal: a comprehensive view of school phobia and other failures of school attendance. *Am. J. Orthopsychiatry* 32, 707–718. doi: 10.1111/j.1939-0025.1962.tb00320.x
- Katz, F., Leith, E., and Paliokosta, E. (2016). Fifteen-minute consultation for a child not attending school: a structured approach to school refusal. *Arch. Dis. Child. Educ. Pract. Ed.* 101, 21–25. doi: 10.1136/archdischild-2013-304055
- Kearney, C. A. (2001). *School refusal behavior in youth: A fundamental approach to assessment and treatment*. Washington, D.C.: American Psychological Association.
- Kearney, C. A. (2002). Identifying the function of school refusal behavior: a revision of the school refusal assessment scale. *J. Psychopathol. Behav. Assess.* 24, 235–245. doi: 10.1023/A:1020774932043
- Kearney, C. A. (2003). Bridging the gap among professionals who address youths with school absenteeism: overview and suggestions for consensus. *Prof. Psychol. Res. Pract.* 34, 57–65. doi: 10.1037/0735-7028.34.1.57
- Kearney, C. A. (2007). Forms and functions of school refusal behavior in youth: an empirical analysis of absenteeism severity. *J. Child Psychol. Psychiatry* 48, 53–61. doi: 10.1111/j.1469-7610.2006.01634.x
- Kearney, C. A. (2008). *Helping school refusing children and their parents: A guide for school-based professionals*. New York: Oxford University Press.

- Kearney, C. A. (2016). *Managing school absenteeism at multiple tiers: An evidence-based and practical guide for professionals*. New York: Oxford University Press.
- Kearney, C. A. (2019). *Helping families of youth with school attendance problems: A practical guide for mental health and school-based professionals*. New York: Oxford.
- Kearney, C. A., and Albano, A. M. (2004). The functional profiles of school refusal behavior: diagnostic aspects. *Behav. Modif.* 28, 147–161. doi: 10.1177/0145445503259263
- Kearney, C. A., and Albano, A. M. (2018). *When children refuse school: Therapist guide*. New York: Oxford University Press.
- Kearney, C. A., and Fornander, M. J. (2018). “School refusal behavior and absenteeism” in *Encyclopedia of adolescence*. 2nd Edn. ed. R. J. R. Levesque (New York: Springer), 3298–3303.
- Kearney, C. A., and Graczyk, P. (2014). A response to intervention model to promote school attendance and decrease school absenteeism. *Child Youth Care Forum* 43, 1–25. doi: 10.1007/s10566-013-9222-1
- Kearney, C. A., and Silverman, W. K. (1990). A preliminary analysis of a functional model of assessment and treatment for school refusal behavior. *Behav. Mod.* 14, 340–366. doi: 10.1177/01454455900143007
- Kearney, C. A., and Silverman, W. K. (1995). Family environment of youngsters with school refusal behavior: a synopsis with implications for assessment and treatment. *J. Fam. Ther.* 23, 59–72. doi: 10.1080/01926189508251336
- Kearney, C. A., and Silverman, W. K. (1996). The evolution and reconciliation of taxonomic strategies for school refusal behavior. *Clin. Psychol. Sci. Pract.* 3, 339–354. doi: 10.1111/j.1468-2850.1996.tb00087.x
- Kearney, C. A., and Tillotson, C. A. (1998). “The school refusal assessment scale” in *Evaluating stress: A book of resources*. Vol. 2, eds. C. P. Zalaquett, and R. J. Wood. (Lanham, MD: Scarecrow), 239–258.
- Kearney, C. A., Turner, D., and Gauger, M. (2010). “School refusal behavior” in *Corsini's encyclopedia of psychology*. 4th Edn. eds. I. Weiner and E. Craighead (New York: Wiley), 1517–1519.
- Keppens, G., and Spruyt, B. (2017). Towards a typology of occasional truancy: an operationalisation study of occasional truancy in secondary education in Flanders. *Res. Pap. Educ.* 32, 121–135. doi: 10.1080/02671522.2015.1136833
- Kiani, C., Otero, K., Taufique, S., and Ivanov, I. (2018). Chronic absenteeism: a brief review of causes, course and treatment. *Adolesc. Psychiatry* 8, 214–230. doi: 10.2174/2210676608666180709155116
- Kieling, C., Baker-Henningham, H., Belfer, M., Conti, G., Ertem, I., Omigbodun, O., et al. (2011). Child and adolescent mental health worldwide: evidence for action. *Lancet* 378, 1515–1525. doi: 10.1016/S0140-6736(11)60827-1
- Kim, G. (2010). A validation study of the school refusal assessment scale for Korean adolescents. *Korean J. Play Ther.* 13, 121–139.
- Kim, J. S., and Streeter, C. L. (2016). *Strategies and interventions for improving school attendance*. Encyclopedia of social work. Available at: <http://socialwork.oxfordre.com/view/10.1093/acrefore/9780199975839.001.0001/acrefore-9780199975839-e-1227?print=pdf>
- King, N. J., Heyne, D., Tonge, B., Gullone, E., and Ollendick, T. H. (2001). School refusal: categorical diagnoses, functional analysis and treatment planning. *Clin. Psychol. Psychother.* 8, 352–360. doi: 10.1002/cpp.313
- Knollmann, M., Reissner, V., and Hebebrand, J. (2019). Towards a comprehensive assessment of school absenteeism: development and initial validation of the inventory of school attendance problems. *Eur. Child Adolesc. Psychiatry* 28, 399–414. doi: 10.1007/s00787-018-1204-2
- Kolvin, I., Berney, T. P., and Bhate, S. R. (1984). Classification and diagnosis of depression in school phobia. *Br. J. Psychiatry* 145, 347–357. doi: 10.1192/bjp.145.4.347
- Lamb, S., Markussen, E., Teese, R., Sandberg, N., and Polesel, J. (Eds.) (2010). *School dropout and completion: International comparative studies in theory and policy*. New York: Springer Science & Business Media.
- Lansford, J. E., Dodge, K. A., Pettit, G. S., and Bates, J. E. (2016). A public health perspective on school dropout and adult outcomes: a prospective study of risk and protective factors from age 5 to 27 years. *J. Adolesc. Health* 58, 652–658. doi: 10.1016/j.jadohealth.2016.01.014
- Last, C. G., and Strauss, C. C. (1990). School refusal in anxiety-disordered children and adolescents. *J. Am. Acad. Child Adolesc. Psychiatry* 29, 31–35. doi: 10.1097/00004583-199001000-00006
- Latif, A., Choudhary, A., and Hammayun, A. A. (2015). Economic effects of student dropouts: a comparative study. *J. Glob. Econ.* 3, 2–5. doi: 10.4172/2375-4389.1000137
- Layne, A. E., Bernstein, G. A., Egan, E. A., and Kushner, M. G. (2003). Predictors of treatment response in anxious-depressed adolescents with school refusal. *J. Am. Acad. Child Adolesc. Psychiatry* 42, 319–326. doi: 10.1097/00004583-200303000-00012
- Lee, J. O., Kosterman, R., Jones, T. M., Herrenkohl, T. I., Rhew, I. C., Catalano, R. F., et al. (2016). Mechanisms linking high school graduation to health disparities in young adulthood: a longitudinal analysis of the role of health behaviours, psychosocial stressors, and health insurance. *Public Health* 139, 61–69. doi: 10.1016/j.puhe.2016.06.010
- Levin, H. M. (2017). Accelerated Schools for At-Risk Students. CPRE Research Reports. Available at: https://repository.upenn.edu/cpre_researchreports/10 (Accessed June 12, 2019).
- Lum, A., Wakefield, C. E., Donnan, B., Burns, M. A., Fardell, J. E., and Marshall, G. M. (2017). Understanding the school experiences of children and adolescents with serious chronic illness: a systematic meta-review. *Child Care Health Dev.* 43, 645–662. doi: 10.1111/cch.12475
- Lyon, A. R., and Cotler, S. (2007). Toward reduced bias and increased utility in the assessment of school refusal behavior: the case for diverse samples and evaluations of context. *Psychol. Sch.* 44, 551–565. doi: 10.1002/pits.20247
- Maag, J. W. (2012). School-wide discipline and the intransigency of exclusion. *Child Youth Serv. Rev.* 34, 2094–2100. doi: 10.1016/j.childyouth.2012.07.005
- Mallett, C. A. (2016). *The school-to-prison pipeline: A comprehensive assessment*. New York: Springer Publishing Company.
- Marchbanks, M. P. III, Blake, J. J., Smith, D., Seibert, A. L., and Carmichael, D. (2014). More than a drop in the bucket: the social and economic costs of dropouts and grade retentions associated with exclusionary discipline. *J. Appl. Res. Child.* 5, 1–36. Available at: <http://digitalcommons.library.tmc.edu/childrenatrisk%0Ahttp://digitalcommons.library.tmc.edu/childrenatrisk/vol5/iss2/17>
- Mauro, C. F., and Machell, K. A. (2019). “When children and adolescents do not go to school: Terminology, technology, and trends” in *Pediatric anxiety disorders*. eds. S. N. Compton, M. A. Villabø, and H. Kristensen (New York: Academic Press), 439–460. doi: 10.1016/b978-0-12-813004-9.00020-7
- Maynard, B. R., Heyne, D., Brendel, K. E., Bulanda, J. J., Thompson, A. M., and Pigott, T. D. (2018). Treatment for school refusal among children and adolescents: a systematic review and meta-analysis. *Res. Soc. Work. Pract.* 28, 56–67. doi: 10.1177/1049731515598619
- Maynard, B. R., Peters, K. E., Vaughn, M. G., and Sarteschi, C. M. (2013). Fidelity in after-school program intervention research: a systematic review. *Res. Soc. Work. Pract.* 23, 613–623. doi: 10.1177/1049731513491150
- Maynard, B. R., Salas-Wright, C. P., Vaughn, M. G., and Peters, K. E. (2012). Who are truant youth? Examining distinctive profiles of truant youth using latent profile analysis. *J. Youth Adolesc.* 41, 1671–1684. doi: 10.1007/s10964-012-9788-1
- Maynard, B. R., Vaughn, M. G., Nelson, E. J., Salas-Wright, C. P., Heyne, D. A., and Kremer, K. P. (2017). Truancy in the United States: examining temporal trends and correlates by race, age, and gender. *Child Youth Serv. Res.* 81, 188–196. doi: 10.1016/j.childyouth.2017.08.008
- McCluskey, C. P., Bynum, T. S., and Patchin, J. W. (2004). Reducing chronic absenteeism: an assessment of an early truancy initiative. *Crime Delinq.* 50, 214–234. doi: 10.1177/0011128703258942
- McCluskey, G., Riddell, S., Weedon, E., and Fordyce, M. (2016). Exclusion from school and recognition of difference. *Discourse* 37, 529–539. doi: 10.4324/9780203710777-4
- McConnell, B. M., and Kubina, R. M. Jr. (2014). Connecting with families to improve students' school attendance: a review of the literature. *Prev. Sch. Fail.* 58, 249–256. doi: 10.1080/1045988x.2013.821649
- McCurdy, B. L., Thomas, L., Truckenmiller, A., Rich, S. H., Hillis-Clark, P., and Lopez, J. C. (2016). School-wide positive behavioral interventions and supports for students with emotional and behavioral disorders. *Psychol. Sch.* 53, 375–389. doi: 10.1002/pits.21913
- McIntosh, K., Bohanon, H., and Goodman, S. (2010). Toward true integration of academic and behavior response to intervention systems. Part two: tier 2 support. *Communique* 39, 4–6.
- McIntosh, K., and Goodman, S. (2016). *Integrated multi-tiered systems of support: Blending RTI and PBIS*. New York: Guilford Publications.
- McIntyre-Bhaty, K. (2008). Truancy and coercive consent: is there an alternative? *Educ. Rev.* 60, 375–390. doi: 10.1080/00131910802393407

- McLean, H. Q., Peterson, S. H., King, J. P., Meece, J. K., and Belongia, E. A. (2017). School absenteeism among school-aged children with medically attended acute viral respiratory illness during three influenza seasons, 2012–2013 through 2014–2015. *Influenza Other Respir. Viruses* 11, 220–229. doi: 10.1111/irv.12440
- McNeill, K. F., Friedman, B. D., and Chavez, C. (2016). Keep them so you can teach them: alternatives to exclusionary discipline. *Int. Public Health J.* 8, 169–181.
- McShane, G., Walter, G., and Rey, J. M. (2001). Characteristics of adolescents with school refusal. *Aust. N. Z. J. Psychiatry* 35, 822–826. doi: 10.1046/j.1440-1614.2001.00955.x
- McShane, G., Walter, G., and Rey, J. M. (2004). Functional outcome of adolescents with 'school refusal'. *Clin. Child Psychol. Psychiatry* 9, 53–60. doi: 10.1177/1359104504039172
- Melvin, G. A., Dudley, A. L., Gordon, M. S., Klimkeit, E., Gullone, E., Taffe, J., et al. (2017). Augmenting cognitive behavior therapy for school refusal with fluoxetine: a randomized controlled trial. *Child Psychiatry Hum. Dev.* 48, 485–497. doi: 10.1007/s10578-016-0675-y
- Miller, A. B., Esposito-Smythers, C., and Leichtweis, R. N. (2015). Role of social support in adolescent suicidal ideation and suicide attempts. *J. Adolesc. Health* 56, 286–292. doi: 10.1016/j.jadohealth.2014.10.265
- Monahan, K. C., VanDerhei, S., Bechtold, J., and Cauffman, E. (2014). From the school yard to the squad car: school discipline, truancy, and arrest. *J. Youth Adolesc.* 43, 1110–1122. doi: 10.1007/s10964-014-0103-1
- Morrissey, T. W., Hutchison, L., and Winsler, A. (2014). Family income, school attendance, and academic achievement in elementary school. *Dev. Psychol.* 50, 741–753. doi: 10.1037/a0033848
- National Center for Education Statistics (2018). The condition of education 2018. *U.S. Department of Education*, 188–190. Available at: <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2018144> (Accessed June 12, 2019).
- Nauer, K. (2016). Battling chronic absenteeism. *Phi Delta Kappa Int.* 98, 28–34. doi: 10.1177/0031721716671903
- Nayak, A., Sangoi, B., and Nachane, H. (2018). School refusal behavior in Indian children: analysis of clinical profile, psychopathology and development of a best-fit risk assessment model. *Indian J. Pediatr.* 85, 1073–1078. doi: 10.1007/s12098-018-2631-2
- Outhouse, C. M. (2012). Carnegie units and high school attendance policies: an absence of thought? *J. Cases Educ. Lead.* 15, 3–21. doi: 10.1177/1555458912470664
- Parker, P. D., Marsh, H. W., Morin, A. J., Seaton, M., and Van Zanden, B. (2015). If one goes up the other must come down: examining ipsative relationships between math and English self-concept trajectories across high school. *Br. J. Educ. Psychol.* 85, 172–191. doi: 10.1111/bjep.12050
- Pellegrini, D. W. (2007). School non-attendance: definitions, meanings, responses, interventions. *Educ. Psychol. Pract.* 23, 63–77. doi: 10.1080/02667360601154691
- Pengpid, S., and Peltzer, K. (2017). Associations between behavioural risk factors and overweight and obesity among adults in population-based samples from 31 countries. *Obes. Res. Clin. Pract.* 11, 158–166. doi: 10.1016/j.orcp.2016.08.001
- Perry, B. L., and Morris, E. W. (2014). Suspending progress: collateral consequences of exclusionary punishment in public schools. *Am. Sociol. Rev.* 79, 1067–1087. doi: 10.1177/0003122414556308
- Pflug, V., and Schneider, S. (2016). School absenteeism: an online survey via social networks. *Child Psychiatry Hum. Dev.* 47, 417–429. doi: 10.1007/s10578-015-0576-5
- Pompili, M., Shrivastava, A., Serafini, G., Innamorati, M., Milelli, M., Erbutto, D., et al. (2013). Bereavement after the suicide of a significant other. *Indian J. Psychiatry* 55, 256–263. doi: 10.4103/0019-5545.117145
- Ramberg, J., Brodin Låftman, S., Fransson, E., and Modin, B. (2019). School effectiveness and truancy: a multilevel study of upper secondary schools in Stockholm. *Int. J. Adolesc. Youth* 24, 185–198. doi: 10.1080/02673843.2018.1503085
- Ramirez, M., Wu, Y., Kataoka, S., Wong, M., Yang, J., Peek-Asa, C., et al. (2012). Youth violence across multiple dimensions: a study of violence, absenteeism, and suspensions among middle school children. *J. Pediatr.* 161, 542–546. doi: 10.1016/j.jpeds.2012.03.014
- Redmond, S. M., and Hosp, J. L. (2008). Absenteeism rates in students receiving services for CDs, LDs, and EDs: a macroscopic view of the consequences of disability. *Lang. Speech Hear. Serv. Sch.* 39, 97–103. doi: 10.1044/0161-1461(2008/010)
- Reid, K. (1999). *Truancy and schools*. London: Routledge.
- Reid, K. (2007). An evaluation of reports on the attendance of pupils in out-of-school provision. *Int. J. Educ. Manag.* 21, 144–157. doi: 10.1108/09513540710729935
- Reid, K. (2010). Management of school attendance in the UK: a strategic analysis. *Educ. Manage. Adm. Lead.* 38, 88–106. doi: 10.1177/1741143209352387
- Reid, K. (2013). *Managing school attendance: Successful intervention strategies for reducing truancy*. London: Routledge.
- Reinke, W. M., Stormont, M., Clare, A., Latimore, T., and Herman, K. C. (2013). Differentiating tier 2 social behavioral interventions according to function of behavior. *J. Appl. Sch. Psychol.* 29, 148–166. doi: 10.1080/15377903.2013.778771
- Richards, H. J., and Hadwin, J. A. (2011). An exploration of the relationship between trait anxiety and school attendance in young people. *Sch. Ment. Heal.* 3, 236–244. doi: 10.1007/s12310-011-9054-9
- Richardson, K. (2016). Family therapy for child and adolescent school refusal. *Aust. N. Z. J. Fam. Ther.* 37, 528–546. doi: 10.1002/anzf.1188
- Rocque, M., Jennings, W. G., Piquero, A. R., Ozkan, T., and Farrington, D. P. (2017). The importance of school attendance: findings from the Cambridge study in delinquent development on the life-course effects of truancy. *Crime Delinq.* 63, 592–612. doi: 10.1177/0011128716660520
- Rodriguez, B. J., Loman, S. L., and Borgmeier, C. (2016). Tier 2 interventions in positive behavior support: a survey of school implementation. *Prev. Sch. Fail.* 60, 94–105. doi: 10.1080/1045988x.2015.1025354
- Rohrig, S. N., and Puliafico, A. C. (2018). Treatment of school refusal in an adolescent with comorbid anxiety and chronic medical illness. *Evidence-Based Pract. Child Adolesc. Ment. Health* 3, 129–141. doi: 10.1080/23794925.2018.1447855
- Rubenstein, J. S., and Hastings, E. M. (1980). School refusal in adolescence: understanding the symptom. *Adolescence* 15, 775–782.
- Rumberger, R. W. (2011). *Dropping out: Why students drop out of high school and what can be done about it*. Cambridge, MA: Harvard College.
- Ruscio, J., and Ruscio, A. M. (2008). Categories and dimensions: advancing psychological science through the study of latent structure. *Curr. Dir. Psychol. Sci.* 17, 203–207. doi: 10.1111/j.1467-8721.2008.00575.x
- Sälzer, C., and Heine, J. H. (2016). Students' skipping behavior on truancy items and (school) subjects and its relation to test performance in PISA 2012. *Int. J. Educ. Dev.* 46, 103–113. doi: 10.1016/j.ijedudev.2015.10.009
- Sanmartín, R., Inglés, C. J., González, C., Vicent, M., Ruiz-Esteban, C., and García-Fernández, J. M. (2018). Impact of affective profiles on school refusal in a Spanish sample of primary education. *J. Child Fam. Stud.* 27, 1349–1357. doi: 10.1007/s10826-017-0962-7
- Schildkamp, K., Poortman, C. L., and Handelzalts, A. (2016). Data teams for school improvement. *Sch. Eff. Sch. Improv.* 27, 228–254. doi: 10.1080/09243453.2015.1056192
- Scott, T. M., and Cooper, J. (2013). Tertiary-tier PBIS in alternative, residential and correctional school settings: considering intensity in the delivery of evidence-based practice. *Educ. Treat. Child.* 36, 101–119. doi: 10.1353/etc.2013.0029
- Secer, I. (2014). The adaptation of school refusal assessment scale into Turkish: reliability and validity studies. *Pak. J. Stat.* 30, 1197–1202.
- Shabazian, A. N. (2015). The significance of location: patterns of school exclusionary disciplinary practices in public schools. *J. Sch. Violence* 14, 273–298. doi: 10.1080/15388220.2014.913254
- Sibeoni, J., Orri, M., Podlipski, M. A., Labey, M., Campredon, S., Gerardin, P., et al. (2018). The experience of psychiatric care of adolescents with anxiety-based school refusal and of their parents: a qualitative study. *J. Can. Acad. Child Adolesc. Psychiatry* 27, 39–49. doi: 10.1111/j.1744-6163.1999.tb00565.x
- Simonsen, B., and Sugai, G. (2013). PBIS in alternative education settings: positive support for youth with high-risk behavior. *Educ. Treat. Child.* 36, 3–14. doi: 10.1353/etc.2013.0030
- Skedgell, K., and Kearney, C. A. (2018). Predictors of school absenteeism severity at multiple levels: a classification and regression tree analysis. *Child Youth Serv. Res.* 86, 236–245. doi: 10.1016/j.childyouth.2018.01.043
- Smerillo, N. E., Reynolds, A. J., Temple, J. A., and Ou, S. R. (2018). Chronic absence, eighth-grade achievement, and high school attainment in the Chicago longitudinal study. *J. Sch. Psychol.* 67, 163–178. doi: 10.1016/j.jsp.2017.11.001
- Smythe-Leistico, K., and Page, L. C. (2018). Connect-text: leveraging text-message communication to mitigate chronic absenteeism and improve parental engagement in the earliest years of schooling. *J. Educ. Stud. Placed Risk* 23, 139–152. doi: 10.1080/10824669.2018.1434658
- Spencer, A. M. (2009). School attendance patterns, unmet educational needs, and truancy: a chronological perspective. *Remedial Spec. Educ.* 30, 309–319. doi: 10.1177/0741932508321017

- Stempel, H., Cox-Martin, M., Bronsert, M., Dickinson, L. M., and Allison, M. A. (2017). Chronic school absenteeism and the role of adverse childhood experiences. *Acad. Pediatr.* 17, 837–843. doi: 10.1016/j.acap.2017.09.013
- Stephan, S. H., Sugai, G., Lever, N., and Connors, E. (2015). Strategies for integrating mental health into schools via a multitiered system of support. *Child Adolesc. Psychiatry Clin.* 24, 211–231. doi: 10.1016/j.chc.2014.12.002
- Stoiber, K. C., and Gettinger, M. (2016). “Multi-tiered systems of support and evidence-based practices” in *Handbook of response to intervention*. eds. S. Jimerson, M. K. Burns, and A. M. VanDerHeyden (Boston, MA: Springer), 121–141.
- Stone, D. H., and Stone, L. S. (2011). Dangerous and disruptive or simply cutting class; when should schools kick kids to the curb? An empirical study of school suspension and due process rights. *J. Law Fam. Stud.* 13, 1–42. doi: 10.2139/ssrn.1874981
- Strand, A. S. (2014). ‘School–no thanks—it ain’t my thing’: accounts for truancy. Students’ perspectives on their truancy and school lives. *Int. J. Adolesc. Youth* 19, 262–277. doi: 10.1080/02673843.2012.743920
- Sugai, G., and Horner, R. H. (2009). Responsiveness-to-intervention and school-wide positive behavior supports: integration of multi-tiered system approaches. *Exceptionality* 17, 223–237. doi: 10.1080/09362830903235375
- Sugrue, E. P., Zuel, T., and Laliberte, T. (2016). The ecological context of chronic school absenteeism in the elementary grades. *Child. Sch.* 38, 137–145. doi: 10.1093/cs/cdw020
- Suh, S., and Suh, J. (2007). Risk factors and levels of risk for high school dropouts. *Prof. Sch. Couns.* 10:2156759X0701000312. doi: 10.5330/prsc.10.3.w26024vww6541gv7
- Suh, S., Suh, J., and Houston, I. (2007). Predictors of categorical at-risk high school dropouts. *J. Couns. Dev.* 85, 196–203. doi: 10.1002/j.1556-6678.2007.tb00463.x
- Sutphen, R. D., Ford, J. P., and Flaherty, C. (2010). Truancy interventions: a review of the research literature. *Res. Soc. Work. Pract.* 20, 161–171. doi: 10.1177/1049731509347861
- Taylor, R. D., Oberle, E., Durlak, J. A., and Weissberg, R. P. (2017). Promoting positive youth development through school-based social and emotional learning interventions: a meta-analysis of follow-up effects. *Child Dev.* 88, 1156–1171. doi: 10.1111/cdev.12864
- Thambirajah, M. S., Grandison, K. J., and De-Hayes, L. (2008). *Understanding school refusal: A handbook for professionals in education, health and social care*. London: Jessica Kingsley Publishers.
- Thastum, M., Johnsen, D. B., Silverman, W. K., Jeppesen, P., Heyne, D. A., and Lomholt, J. J. (2019). The Back2School modular cognitive behavioral intervention for youths with problematic school absenteeism: study protocol for a randomized controlled trial. *Trials* 20:29. doi: 10.1186/s13063-018-3124-3
- Theriot, M. T., Craun, S. W., and Dupper, D. R. (2010). Multilevel evaluation of factors predicting school exclusion among middle and high school students. *Child Youth Serv. Rev.* 32, 13–19. doi: 10.1016/j.childyouth.2009.06.009
- Tobias, A. (2019). A grounded theory study of family coach intervention with persistent school non-attenders. *Educ. Psychol. Pract.* 35, 17–33. doi: 10.1080/02667363.2018.1518215
- Tolin, D. F., Whiting, S., Maltby, N., Diefenbach, G. J., Lothstein, M. A., Hardcastle, S., et al. (2009). Intensive (daily) behavior therapy for school refusal: a multiple baseline case series. *Cogn. Behav. Pract.* 16, 332–344. doi: 10.1016/j.cbpra.2009.02.003
- Torma, S., and Halsti, A. (1975). Factors contributing to school phobia and truancy. *Psychiatr. Fenn.* 44, 209–220.
- U.S. Census Bureau (2012). *Educational attainment in the United States*. Washington DC: U.S. Census Bureau.
- U.S. Department of Education (2019). *Chronic absenteeism in the nation’s schools: A hidden educational crisis*. Available at: <https://www2.ed.gov/datastory/chronicabsenteeism.html> (Accessed June 12, 2019).
- UNESCO Institute for Statistics (2016). *Monitoring education participation: Framework for monitoring children and adolescents who are out of school or at risk of dropping out*. Vol. 1. Washington, D.C.: UNESCO: World Health Organization. Available at: <https://books.google.com/books?hl=en&lr=&id=ZlpHdPD9n4QC&pgis=1>.
- van der Woude, L. B., van der Stouwe, T., and Stams, G. J. J. M. (2017). Differences between risk factors for truancy and delinquency in Dutch adolescents. *Child Youth Serv. Rev.* 73, 9–14. doi: 10.1016/j.childyouth.2016.11.028
- Van Eck, K., Johnson, S. R., Bettencourt, A., and Johnson, S. L. (2017). How school climate relates to chronic absence: a multi-level latent profile analysis. *J. Sch. Psychol.* 61, 89–102. doi: 10.1016/j.jsp.2016.10.001
- Vaughn, M. G., Maynard, B. R., Salas-Wright, C. P., Perron, B. E., and Abdon, A. (2013). Prevalence and correlates of truancy in the US: results from a national sample. *J. Adolesc.* 36, 767–776. doi: 10.1016/j.adolescence.2013.03.015
- Veenstra, R., Lindenberg, S., Tinga, F., and Ormel, J. (2010). Truancy in late elementary and early secondary education: the influence of social bonds and self-control—the TRAILS study. *Int. J. Behav. Dev.* 34, 302–310. doi: 10.1177/0165025409347987
- Wang, M. T., and Fredricks, J. A. (2014). The reciprocal links between school engagement, youth problem behaviors, and school dropout during adolescence. *Child Dev.* 85, 722–737. doi: 10.1111/cdev.12138
- Wegmann, K. M., and Smith, B. (2019). Examining racial/ethnic disparities in school discipline in the context of student-reported behavior infractions. *Child Youth Serv. Rev.* 103, 18–27. doi: 10.1016/j.childyouth.2019.05.027
- Weist, M. D., Eber, L., Horner, R., Splett, J., Putnam, R., Barrett, S., et al. (2018). Improving multitiered systems of support for students with “internalizing” emotional/behavioral problems. *J. Posit. Behav. Interv.* 20, 172–184. doi: 10.1177/1098300717753832
- Widiger, T. A., and Samuel, D. B. (2005). Diagnostic categories or dimensions? A question for the diagnostic and statistical manual of mental disorders. *J. Abnorm. Psychol.* 114, 494–504. doi: 10.1037/0021-843X.114.4.494
- Wilson, S. J., Tanner-Smith, E. E., Lipsey, M. W., Steinka-Fry, K., and Morrison, J. (2011). Dropout prevention and intervention programs: effects on school completion and dropout among school-aged children and youth. *Campbell Syst. Rev.* 2011:8.
- Wood, J. J., Lynne-Landsman, S. D., Langer, D. A., Wood, P. A., Clark, S. L., Mark Eddy, J., et al. (2012). School attendance problems and youth psychopathology: structural cross-lagged regression models in three longitudinal data sets. *Child Dev.* 83, 351–366. doi: 10.1111/j.1467-8624.2011.01677.x
- Yang, K. E., and Ham, S. H. (2017). Truancy as systemic discrimination: anti-discrimination legislation and its effect on school attendance among immigrant children. *Soc. Sci. J.* 54, 216–226. doi: 10.1016/j.soscij.2017.02.001
- Young, J. G., Brasic, J. R., Kisnadwala, H., and Leven, L. (1990). “Strategies for research on school refusal and related nonattendance at school” in *Why children reject school: Views from seven countries*. eds. C. Chiland, and J. G. Young (New Haven, CT: Yale University Press), 199–223.
- Zaff, J. F., Donlan, A., Gunning, A., Anderson, S. E., McDermott, E., and Sedaca, M. (2017). Factors that promote high school graduation: a review of the literature. *Educ. Psychol. Rev.* 29, 447–476. doi: 10.1007/s10648-016-9363-5
- Zhang, P., Zhang, X., Brown, J., Vistisen, D., Sicree, R., Shaw, J., et al. (2010). Global healthcare expenditure on diabetes for 2010 and 2030. *Diabetes Res. Clin. Pract.* 87, 293–301. doi: 10.1016/j.diabres.2010.01.026

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2019 Kearney, González, Graczyk and Fornander. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



Erratum: Reconciling Contemporary Approaches to School Attendance and School Absenteeism: Toward Promotion and Nimble Response, Global Policy Review and Implementation, and Future Adaptability (Part 1)

OPEN ACCESS

Approved by:
Frontiers Editorial Office,
Frontiers Media SA, Switzerland

***Correspondence:**
Frontiers Production Office
production.office@frontiersin.org

Specialty section:
This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Psychology

Received: 22 November 2019

Accepted: 25 November 2019

Published: 27 November 2019

Citation:
Frontiers Production Office (2019)
Erratum: Reconciling Contemporary
Approaches to School Attendance
and School Absenteeism: Toward
Promotion and Nimble Response,
Global Policy Review and
Implementation, and Future
Adaptability (Part 1).
Front. Psychol. 10:2766.
doi: 10.3389/fpsyg.2019.02766

Frontiers Production Office *

Frontiers Production Office, Frontiers Media SA, Lausanne, Switzerland

Keywords: school attendance, school absenteeism, truancy, school refusal, school withdrawal, school exclusion, multi-tiered system of supports, response to intervention

An Erratum on

Reconciling Contemporary Approaches to School Attendance and School Absenteeism: Toward Promotion and Nimble Response, Global Policy Review and Implementation, and Future Adaptability (Part 1)

by Kearney, C. A., González, C., Graczyk, P. A., and Fornander, M. J. (2019). *Front. Psychol.* 10:2222. doi: 10.3389/fpsyg.2019.02222

Due to an error in the typesetting process, the short running title was incorrectly provided as “Dairy Manure and Raspberry Safety.” The correct short running title is “School Attendance and School Absenteeism.”

The publisher apologizes for this mistake. The original article has been updated.

Copyright © 2019 Frontiers Production Office. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



Family Environment Variables as Predictors of School Absenteeism Severity at Multiple Levels: Ensemble and Classification and Regression Tree Analysis

Mirae J. Fornander and Christopher A. Kearney*

University of Nevada, Las Vegas, Las Vegas, NV, United States

OPEN ACCESS

Edited by:

Jesus de la Fuente,
University of Navarra, Spain

Reviewed by:

Mohamed A. Ali,
Grand Canyon University,
United States
Tony Kuo,
UCLA Fielding School of Public
Health, United States

*Correspondence:

Christopher A. Kearney
chris.kearney@unlv.edu

Specialty section:

This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Psychology

Received: 28 June 2019

Accepted: 07 October 2019

Published: 18 October 2019

Citation:

Fornander MJ and Kearney CA
(2019) Family Environment
Variables as Predictors of School
Absenteeism Severity at Multiple
Levels: Ensemble and Classification
and Regression Tree Analysis.
Front. Psychol. 10:2381.
doi: 10.3389/fpsyg.2019.02381

School attendance problems, including school absenteeism, are common to many students worldwide, and frameworks to better understand these heterogeneous students include multiple classes or tiers of intertwined risk factors as well as interventions. Recent studies have thus examined risk factors at varying levels of absenteeism severity to demarcate distinctions among these tiers. Prior studies in this regard have focused more on demographic and academic variables and less on family environment risk factors that are endemic to this population. The present study utilized ensemble and classification and regression tree analysis to identify potential family environment risk factors among youth (i.e., children and adolescents) at different levels of school absenteeism severity (i.e., 1 + %, 3 + %, 5 + %, 10 + %). Higher levels of absenteeism were also examined on an exploratory basis. Participants included 341 youth aged 5–17 years ($M = 12.2$; $SD = 3.3$) and their families from an outpatient therapy clinic (68.3%) and community (31.7%) setting, the latter from a family court and truancy diversion program cohort. Family environment risk factors tended to be more circumscribed and informative at higher levels of absenteeism, with greater diversity at lower levels. Higher levels of absenteeism appear more closely related to lower achievement orientation, active-recreational orientation, cohesion, and expressiveness, though several nuanced results were found as well. Absenteeism severity levels of 10–15% may be associated more with qualitative changes in family functioning. These data may support a Tier 2-Tier 3 distinction in this regard and may indicate the need for specific family-based intervention goals at higher levels of absenteeism severity.

Keywords: absenteeism severity, truancy, ensemble analysis, classification and regression tree analysis, family environment, risk variables

INTRODUCTION

School attendance problems, including school absenteeism, are common to many students worldwide (UNESCO, 2012). School absenteeism has been linked to academic performance and achievement deficiencies, various mental health and social problems, and later school dropout (Bridgeland et al., 2006; Burton et al., 2014; Attwood and Croll, 2015). School

attendance problems leading to dropout can have lingering effects into adulthood as well, including increased risk for eventual economic, marital, occupational, and psychiatric problems (Christenson and Thurlow, 2004; Rocque et al., 2017; Mazerolle et al., 2018).

Recent theoretical frameworks of school attendance problems have focused on multiple classes or tiers of intertwined risk factors as well as interventions to fully capture the complexity of this heterogeneous population (Kearney, 2008; Kearney and Graczyk, 2014; Skedgell and Kearney, 2018; Ingul et al., 2019). Researchers have identified general classes of factors, such as child, parent, family, peer, school, and community variables, which enhance risk for school attendance problems (Ready, 2010; Burrus and Roberts, 2012; Ingul et al., 2012; Havik et al., 2015; Maxwell, 2016; McKee and Caldarella, 2016). These classes of risk factors often work in tandem, particularly with respect to chronic and severe school attendance problems and school dropout (Freeman and Simonsen, 2015).

Family environment type may be one such risk factor that directly impacts school attendance and academic achievement in youth (Epstein and Sheldon, 2002; Hill and Taylor, 2004). Bernstein et al. (1990, 1999) and Bernstein and Borchardt, 1996, for example, identified several family variables associated with anxiety-based school refusal. These variables included lack of agreement among family members with respect to roles, inconsistency of family rules, and greater communication difficulties, rigidity, and disengagement. Lagana (2004) found that low family cohesion was more characteristic of students at medium to high risk of school dropout than those at low risk. Family structure and culture relate closely to school dropout as well (De Witte et al., 2013).

Kearney and Silverman (1995) identified various dynamic subtypes among families of youth with broader school refusal behavior: enmeshed, detached, isolated, conflictive, healthy, and mixed. Enmeshed families display extreme closeness, emotional dependency, over-involvement, and loyalty but lack developmentally appropriate autonomy, leading some youth to feel insecure and display internalizing and externalizing symptoms (Barber and Buehler, 1996; Davies et al., 2004; Berryhill et al., 2018). Detached family members are relatively uninvolved or inattentive to one another, leading some youth to display internalizing and externalizing symptoms, poor emotional regulation, and insecure relationships with family members (Weiss and Cain, 1964; Davies et al., 2004; Lindblom et al., 2017).

Conflictive families display a lack of intimacy and emotional expression in addition to high rates of struggle and hostility among family members, leading some youth to display internalizing symptoms and risk-taking behaviors (Makihara et al., 1985; Jaycox and Repetti, 1993; Bradley et al., 2010; Chen et al., 2017). Isolated families are characterized by minimal, if any, contact with people outside of the family, leading some youth to experience stress and social withdrawal (Wahler, 1980; Tucker and Rodriguez, 2014). Healthy families are characterized by adaptive functioning and good communication and

problem-solving skills. Mixed families display characteristics of several of these patterns (Kearney and Silverman, 1995; Barber and Buehler, 1996).

In addition, researchers have begun to focus on the concept of multi-tiered systems of support (MTSS) and related models to conceptualize different layers of intervention for school attendance problems (Freeman et al., 2016; Kearney, 2016; Elliott and Place, 2019). MTSS aims to provide high-quality, individualized instruction, and intervention, informed by frequent progress monitoring, for all aspects of student education (McIntosh and Goodman, 2016). MTSS models are often arranged in three tiers that focus on prevention (Tier 1), early intervention for emerging, acute problems (Tier 2), and intensive intervention for chronic and severe problems (Tier 3; Eagle et al., 2015). MTSS models have been applied to academic, social, and behavioral problems and skills across various age ranges and school settings (August et al., 2018).

Kearney and Graczyk (2014) were the first to apply MTSS principles to a model of school absenteeism directly. Each MTSS tier has a specific focus based on the severity of school absenteeism: (1) Tier 1 focuses on enhancing functioning and schoolwide attendance and preventing absenteeism for all students, (2) Tier 2 focuses on addressing students with emerging, acute, or mild to moderate school absenteeism, and (3) Tier 3 focuses on addressing students with chronic and severe school absenteeism (Kearney, 2016). Specific interventions are matched to each tier to help school personnel identify individualized responses. Recent research has demonstrated the value of applying MTSS models to school absenteeism. For example, schools that implement MTSS with higher fidelity have lower levels of school absenteeism than schools with less fidelity (Freeman et al., 2016). School districts may also include attendance measures in MTSS models (Coffey et al., 2018).

A key task for researchers utilizing MTSS models for school absenteeism has been to identify demarcations between the tiers. A distinction between Tiers 1 and 2 essentially means a distinction between nonproblematic and problematic behavior, such as between appropriate school attendance and school absenteeism in need of intervention (Pullen and Kennedy, 2019). However, no consistent, consensus definition for problematic school absenteeism exists across research disciplines or school districts (Gentle-Genitty et al., 2015; Spruyt et al., 2016). Greater consensus can be found with respect to distinguishing Tiers 2 and 3, or identifying at what point school absenteeism is chronic and severe (DePaoli et al., 2015). Researchers, school districts, and other agencies sometimes utilize a 10% absenteeism cutoff to identify chronic absenteeism, though this is somewhat arbitrary and not universal (Conry and Richards, 2018).

Specific data-based demarcations between these tiers remain sparse, despite the fact that such distinctions would help inform early warning systems and intervention assignments for student absenteeism (Chu et al., 2018). Skedgell and Kearney (2016, 2018) found that risk factors for levels of absenteeism at 10% or higher tended to be more restricted than risk factors at lower levels of absenteeism. These studies focused primarily on academic and demographic variables, however, without

examining family factors that have been identified as a key correlate of school attendance problems (Dahl, 2016).

The present study aimed to identify potential family environment risk factors among youth at different levels of school absenteeism severity (i.e., 1 + %, 3 + %, 5 + %, 10 + %). Participants included students referred for services due to substantial school absenteeism, which allowed for analysis of varying levels of severity. In accordance with recent calls to employ machine learning-based methods to examine risk factors for school absenteeism (Chung and Lee, 2019; Sansone, 2019), two sets of statistical approaches were utilized. Ensemble analysis, including chi-square adjusted interaction detection (CHAID), support vector machines, and neural network analyses, is a nonparametric method that combines multiple algorithmic models or classifiers to produce a single best model for a given data set (Berk, 2006). In addition, classification and regression tree analysis (CART) is a nonparametric method that identifies comprehensive subgroups based on interactions among multiple risk or predictor variables (Lemon et al., 2003). Nonparametric methods are increasingly used for academic variables denoted by categorical levels (e.g., Cordero et al., 2017; Lahti et al., 2019). Various levels of school absenteeism were examined, with a general expectation that risk factors at higher levels of absenteeism would be more restricted than risk factors at lower levels of absenteeism.

MATERIALS AND METHODS

Participants

Participants included 341 youth (i.e., children and adolescents) aged 5–17 years ($M = 12.2$; $SD = 3.3$) and their families from an outpatient therapy clinic (68.3%) and community (31.7%) setting, the latter from a family court and truancy diversion program cohort. For the clinic sample, age range was 5–16 years ($M = 11.0$; $SD = 3.2$). Participants were primarily male (62.9%) and were European-American (78.2%), Asian (11.6%), Hispanic (5.8%), African American (2.2%), multiracial or biracial (1.3%), and other (0.4%). For the community sample, age range was 11–17 years ($M = 14.8$; $SD = 1.5$). Participants were primarily female (53.7%) and were Hispanic (75.0%), African American (10.2%), other (5.6%), multiracial or biracial (3.7%), Asian (2.8%), and European-American (2.8%). Across both groups, most parents were married (50.0%); others were divorced (17.1%), separated (16.7%), never married (15.2%), or had another status (1.0%). Most fathers (57.0%) and mothers (63.3%) had graduated high school. Participants missed an average of 19.0% days of school ($SD = 17.2$) at time of assessment. Some youths were referred for treatment for school refusal behaviors (e.g., distress at school, morning misbehaviors designed to miss school, skipped classes, and tardiness) that did not include formal full-day absences.

Measures

The Family Environment Scale: Form R (FES; Moos and Moos, 2009) is a 90-item true/false measure of current family relationships, personal growth, and family system maintenance.

The FES comprises 10 subscales based on standard scores (mean, 50): cohesion (family member support of one another; COH), expressiveness (encouraging expression of feelings; EXP), conflict (open anger and hostility; CON), independence (self-sufficient, assertive members; IND), achievement orientation (activities cast in a competitive framework; ACH), intellectual-cultural orientation (family interest in intellectual and cultural issues; ICO), active-recreational orientation (participation in recreational/social activities; ARO), moral-religious emphasis (emphasis on ethical and religious values; MRE), organization (clear structure in activities; ORG), and control (set rules and procedures to structure family life; CTL). Internal consistency (Cronbach's alpha) ranges between 0.61 and 0.78. Cronbach's alpha for the items in the present study was 0.72. Two- and four-month test-retest reliabilities range between 0.70 and 0.91 (Moos, 1990). FES item and subscale standard scores ($M = 50.0$) were utilized as the primary unit of analysis in the present study.

School staff or parents provided absenteeism severity data in the form of number of full school days missed. Percentage of full school days missed was calculated by dividing a student's total number of full school days missed by the number of days of school in that academic year, at the time of assessment, and then multiplying that number by 100.

Procedure and Data Analyses

Participants were recruited from a specialized outpatient therapy clinic or community setting. Participants in the community setting were referred to family court or a truancy diversion program by their school or parent(s)/guardian(s) based on prior school absences. Measures that included the FES were administered to youth and their parent(s)/guardian(s) independently and in the presence of a research assistant. Spanish versions of the measures were available. Study procedures, including parent consent and child assent, were approved by a university institutional review board.

Ensemble analysis was utilized to identify potential family environment risk factors among youth with school attendance problems across different levels of school absenteeism. Ensemble analysis is the combination of multiple algorithmic models or classifiers to produce one, best model that can be applied to the data (Berk, 2006). These models have been shown to outperform standard parametric methods, primarily due to the automation of identifying interactions and non-linearities and reducing overestimations of a model's predictive ability (Rosellini et al., 2018). Ensemble analysis can include many different statistical methods; the present study utilized chi-square adjusted interaction detection (CHAID) decision trees, support vector machines, and neural network analyses. Predictors were examined collectively and independently. A multiple imputation method was utilized; different plausible imputed data sets were examined, and combined results were obtained and reported here. Confusion matrices supported the use of CHAID decision trees as the best approach. In addition, CART analyses were utilized to more specifically examine clusters of FES items associated with enhanced risk for a particular level of absenteeism severity (i.e., 1 + %, 3 + %, 5 + %, 10 + %).

Other absenteeism levels were examined on an exploratory basis (i.e., 15 + %, 20 + %, 30 + %, 40 + %). For brevity, significant results are reported.

RESULTS

Absenteeism: 1 + %

For the CHAID analysis, the final collective tree-model that best differentiated youth with 1 + % absenteeism from youth with <1% absenteeism correctly identified 99.4% of participants and identified two main risk factors: FES items 1 and 44. Youth with items 1 (members help and support one another; COH) and 44 (little privacy in our family; IND) endorsed as true were at higher risk for 1 + % absenteeism (66.5%); youth with items 1 and 44 endorsed as false were at lower risk (27.6%). The tree-model demonstrated higher sensitivity than specificity. Independent analysis of the predictors revealed that ARO scores significantly predicted 1 + % absenteeism ($p < 0.02$, $F = 9.58$). ARO scores of ≤ 53.0 indicated higher risk for 1 + % absenteeism (80.1%); ARO scores of > 53.0 indicated lower risk (19.9%). IND scores also significantly predicted 1 + % absenteeism ($p < 0.05$, $F = 7.39$). IND scores of > 37.0 indicated higher risk for 1 + % absenteeism (67.7%); IND scores of ≤ 37.0 indicated lower risk (32.3%).

CART item analysis identified three subgroups at highest risk for 1 + % absenteeism (each node at 100.0%): (1) items 28 (true; talk about religious meaning; MRE) and 40 (true; set ways of doing things; CTL); (2) items 28 (true; talk about religious meaning; MRE), 39 (true; on time is very important; ORG), 40 (false; set ways of doing things; CTL), and 62 (true; money/bills openly talked about; EXP); and (3) items 28 (false; talk about religious meaning; MRE), 29 (true; hard to find things; ORG), and 44 (true; very little privacy in family; IND). The tree-model's accuracy in predicting 1 + % absenteeism was approximately 91.3%.

Absenteeism: 3 + %

For the CHAID analysis, the final collective tree-model that best differentiated youth with 3 + % absenteeism from youth with <3% absenteeism correctly identified 83.2% of participants and identified several items (2, 25, 31, 42, 62, and 89) and subscale scores as risk factors (Table 1). The tree-model demonstrated higher sensitivity than specificity. The final node representing highest overall risk of 3 + % absenteeism (0.968) included items 2 (true; members keep feelings to self; EXP),

25 (true), and 42 (true; doing things spur of the moment; EXP). Independent analysis of the predictors revealed that ARO scores significantly predicted 3 + % absenteeism ($p < 0.01$, $F = 12.62$). ARO scores of ≤ 53.0 indicated higher risk for 3 + % absenteeism (80.1%); ARO scores of > 53.0 indicated lower risk (19.9%).

CART item analysis identified four subgroups at highest risk for 3 + % absenteeism (each node at 100.0%): (1) items 25 (true; money not very important to us; ACH) and 31 (true; feeling of family togetherness; COH); (2) items 25 (false; money not very important to us; ACH), 31 (false; feeling of family togetherness; COH), and 89 (true; dishes done immediately after eating; ORG); (3) items 2 (true; members keep feelings to self; EXP), 5 (true; important to be best; ACO), 25 (true; money not very important to us; ACH), and 53 (false; members sometimes hit; CON); and 4) items 2 (false; members keep feelings to self; EXP), 14 (false; encouraged to be independent; IND), 25 (true; money not very important to us; ACH), 86 (true; like art and music; ICO), and 90 (false; cannot get away with much; CTL). The tree-model's accuracy in predicting 3 + % absenteeism was approximately 85.7%.

Absenteeism: 5 + %

For the CHAID analysis, the final collective tree-model that best differentiated youth with 5 + % absenteeism from youth with <5% absenteeism correctly identified 76.3% of participants and identified several items (2, 29, 35, 40, 50, 62, and 71) and subscale scores as risk factors (Table 2). The tree-model demonstrated higher sensitivity than specificity. The final node representing highest overall risk of 5 + % absenteeism (0.986) included items 2 and 29 (true) and IND scores of ≤ 37 . Independent analysis of the predictors revealed that ARO scores significantly predicted 5 + % absenteeism ($p < 0.02$, $F = 9.57$, predicted 0.760). ARO scores of ≤ 53.0 indicated higher risk for 3 + % absenteeism (80.1%); ARO scores of > 53.0 indicated lower risk (19.9%).

CART item analysis identified three subgroups at highest risk for 5 + % absenteeism (each node at 100.0%): (1) items 51 (true; members back each other; COH), 56 (false; someone plays a musical instrument; ICO), and 77 (true; members go out a lot; ARO); (2) items 34 (false; we come and go as we want; IND), 45 (true; strive to do things better; ACO), 74 (true; hard to be by self without hurting feelings; IND), and 77 (false; members go out a lot; ARO); and (3) items 16 (true; rarely go to plays/concerts; ICO), 17 (false; friends often come over; ARO), 29 (false; hard to find things; ORG), 74

TABLE 1 | FES subscale standard scores predictive of 3 + % absenteeism.

	Higher risk	Lower risk
Expressiveness	34.0–51.5 (8.6%)	59.0–60.0 (3.2%)
Achievement orientation	> 47.0 (4.3%)	≤ 47.0 (4.2%)
Moral-religious emphasis	≤ 61.0 (5.0%)	> 61.0 (2.7%)
Independence	≤ 37.0 (2.4%)	> 37.0 (2.3%)

Subscales presented in descending order of impact.

TABLE 2 | FES subscale standard scores predictive of 5 + % absenteeism.

	Higher risk	Lower risk
Expressiveness	40.8–51.5 (10.0%)	59.0–60.0 (3.7%)
Cohesion	> 32.7 (10.2%)	≤ 32.7 (3.1%)
Independence	> 37.0 (4.9%)	≤ 37.0 (3.0%)
Moral-religious emphasis	≤ 61.0 (3.5%)	> 61.0 (2.3%)
Conflict	> 43.0 (7.8%)	≤ 43.0 (2.2%)

Subscales presented in descending order of impact.

(false; hard to be by self without hurting feelings; IND), and 77 (false; members go out a lot; ARO). The tree-model's accuracy in predicting 5 + % absenteeism was approximately 74.5%.

Absenteeism: 10 + %

For the CHAID analysis, the final collective tree-model that best differentiated youth with 10 + % absenteeism from youth with <10% absenteeism correctly identified 58.3% of participants and identified several items (4, 11, 16, 17, 44, 49, 68, 79, and 87) and subscale scores as risk factors (Table 3). The tree-model demonstrated higher sensitivity than specificity. The final node representing highest overall risk of 10 + % absenteeism (1.000) included ORG scores of 53.0–58.0, ICO scores of 35.9–41.0, and item 17 (true; friends come over; ARO). Independent analysis of the predictors revealed that COH scores significantly predicted 10 + % of days missed. COH scores of ≤ 52.0 indicated higher risk of 10 + % absenteeism (54.8%); COH scores of >52.0 indicated lower risk (45.2%). CART item analysis identified one main subgroup at elevated risk for 10 + % absenteeism (node at 87.5% probability): (1) items 74 (true; hard to be by self without hurting feelings; IND) and 77 (false; members go out a lot; ARO). The tree-model's accuracy in predicting 10 + % absenteeism was approximately 78.3%.

Absenteeism: Higher Levels

CHAID analyses were also conducted on an exploratory basis for absenteeism levels of 15 + %, 20 + %, 30 + %, and 40 + %. The final collective tree-model that best differentiated youth with 15 + % absenteeism from youth with <15% absenteeism correctly identified 52.9% of participants and identified several items (14, 28, 42, 61, 71, and 75) and subscale scores as risk factors. The tree-model demonstrated higher specificity than sensitivity. MRE scores of >61.0 indicated higher risk of 15 + % absenteeism (17.0%); MRE scores of ≤ 43.9 indicated lower risk (10.9%). ACH scores of ≤ 47 indicated higher risk of 15 + % absenteeism (16.6%); ACH scores of >59.0 indicated lower risk (5.4%). CTL scores of >47.2 indicated higher risk of 15 + % absenteeism (6.2%); CTL scores of 42.9–47.2 indicated lower risk (2.3%). IND scores of 51–53 indicated higher risk of 15 + % absenteeism (4.7%); IND scores of >53.0 indicated lower risk (2.6%). ARO scores of ≤ 48.0 indicated higher risk of 15 + % absenteeism (3.3%); ARO scores of >48.0 indicated lower risk (2.6%). The final node representing highest overall

risk of 15 + % absenteeism (0.867) included MRE scores of 56.0–61.0, item 42 (true; doing things spur of the moment; EXP), and item 75 (true; work before play is the rule; ICO). Independent analysis of predictors revealed that ACH scores significantly predicted 15 + % of days missed ($p < 0.04$, $F = 8.16$, predicted = 0.47). ACH scores of ≤ 47.0 indicated higher risk of 15 + % absenteeism (52.2%); ACH scores of >47.0 indicated lower risk (47.8%).

The final collective tree-model that best differentiated youth with 20 + % absenteeism from youth with <20% absenteeism correctly identified 61.4% of participants and identified several items (4, 49, and 79) and subscale scores as risk factors. The tree-model demonstrated higher specificity than sensitivity. COH scores of 23.0–45.9 indicated higher risk of 20 + % absenteeism (27.9%); COH scores of >65.0 indicated lower risk (9.8%). CTL scores of 23.0–45.9 indicated higher risk of 20 + % absenteeism (27.9%); CTL scores of >65.0 indicated lower risk (9.8%). EXP scores of 34.0–47.0 indicated higher risk of 20 + % absenteeism (10.0%); EXP scores of ≤ 34.0 indicated lower risk (4.9%). MRE scores of >61 indicated higher risk of 20 + % absenteeism (5.1%); MRE scores of 43.9–51.0 indicated lower risk (2.4%).

The final collective tree-model that best differentiated youth with 30 + % absenteeism from youth with <30% absenteeism correctly identified 75.0% of participants and identified several items (18, 20, 30, 43, and 85) and subscale scores as risk factors. The tree-model demonstrated higher specificity than sensitivity. COH scores of 23.0–45.9 indicated higher risk of 30 + % absenteeism (27.9%); COH scores of 52–52.6 indicated lower risk (6.5%). MRE scores of 36.0–46.0 indicated higher risk of 30 + % absenteeism (4.0%); MRE scores of ≤ 36 indicated lower risk (3.1%). EXP scores of 34.0–47.0 indicated higher risk of 30 + % absenteeism (10.0%); EXP scores of ≤ 34.0 indicated lower risk (4.9%). IND scores of >37.0 indicated higher risk of 30 + % absenteeism (7.2%); IND scores of ≤ 37.0 indicated lower risk (4.2%). CTL scores of ≤ 43.0 indicated higher risk of 30 + % absenteeism (3.9%); CTL scores of >53.3 indicated lower risk (3.7%). CON scores of 44.0–54.3 indicated higher risk of 30 + % absenteeism (6.9%); CON scores of 38.5–43.0 indicated lower risk (2.4%). Independent analysis of the predictors revealed that ACH scores significantly predicted 30 + % of days missed ($p < 0.05$, $F = 7.87$). ACH scores of ≤ 51.0 indicated higher risk of 30 + % absenteeism (52.5%); ACH scores of >51.0 indicated lower risk (47.5%).

The final collective tree-model that best differentiated youth with 40 + % absenteeism from youth with <40% absenteeism correctly identified 85.0% of participants and identified several items (10, 49, and 55) and subscale scores as risk factors. The tree-model demonstrated higher specificity than sensitivity. COH scores of 23.0–45.9 indicated higher risk of 40 + % absenteeism (10.2%); COH scores of 52.6–59 indicated lower risk (3.2%). MRE scores of 46.0–61.0 indicated higher risk of 40 + % absenteeism (38.8%); MRE scores of ≤ 36 indicated lower risk (7.5%). ORG scores of ≤ 53.0 indicated higher risk of 40 + % absenteeism (16.2%); ORG scores of >53.0 indicated lower risk (6.6%). IND scores of ≤ 51 indicated higher risk of 40 + % absenteeism (5.2%); IND scores of >51.0 indicated lower risk (5.0%). ARO

TABLE 3 | FES subscale standard scores predictive of 10 + % absenteeism.

	Higher risk	Lower risk
Organization	53.0–58.0 (23.4%)	48.0–53.0 (2.5%)
Moral-religious emphasis	≤ 61.0 (5.2%)	61.0–65.9 (2.1%)
Expressiveness	>51.5 (7.3%)	46.8–51.5 (2.1%)
Intellectual-cultural orientation	47.0–58.0 (6.2%)	<35.9 (3.1%)
Achievement orientation	>53.0 (3.7%)	46.8–51.5 (2.6%)
Conflict	≤ 44.0 (2.2%)	>44.0 (2.1%)

Subscales presented in descending order of impact.

scores of ≤ 61.0 indicated higher risk of 40 + % absenteeism (5.4%); ARO scores of >61.0 indicated lower risk (25.0%).

DISCUSSION

The present study examined family environment variables as potential predictors of various absenteeism severity levels. The findings reveal that several family environment variables are indeed related to different severity levels in both broad and more nuanced ways. Broadly, as expected, family environment risk factors tended to be more circumscribed and informative at higher levels of absenteeism, with much greater diversity at lower levels. Higher levels of absenteeism (i.e., 15 + %) appear more closely related to lower achievement orientation, active-recreational orientation, cohesion, and expressiveness. Lower levels of absenteeism (i.e., 1, 3, and 5%) were generally associated with a wider array of family environment variables.

Active-recreational standard scores were generally suppressed across absenteeism severity levels, a result that parallels Hansen et al.'s (1998) finding that less active families were associated with greater levels of school absenteeism among youth with anxiety-based conditions. These authors speculated that a low emphasis on social and physical activities and greater time spent at home may mean that some children may be more apt to spend school time at home. In addition, these children may be more predisposed to have difficulties with social skills and peer interactions that could also interfere with school attendance. Some have also found that school absenteeism is related to less participation in school sports (Hunt and Hopko, 2009), though others have not (Skedgell and Kearney, 2018). Lower active-recreational scores were evident as well in Kearney and Silverman's (1995) study that led those authors to conclude that some families of youth with absentee problems are isolated in nature.

A number of nuanced findings were also revealed in the present study, however, that deserve detailed description. With respect to achievement orientation, for example, elevated standard scores were associated with less absenteeism severity but lower standard scores were associated with greater absenteeism severity. Higher school performance is generally associated with higher competition (Harrison and Rouse, 2014), though effects can depend on gender and age (Little and Garber, 2004; Wang and Holcombe, 2010). At the family level, achievement orientation could translate into specific activities such as modeling academic advancement, reading frequently, encouraging a strong work ethic, and providing enrichment opportunities that distally affect school attendance (Dubow et al., 2009).

In addition, lower standard scores for expressiveness were evident at less severe (3, 5%) and more severe (20, 30%) levels of absenteeism, though elevated standard scores were predictive of 10 + % absenteeism. As noted earlier, Bernstein and Borchardt (1996) found that families of youth with school refusal displayed significant problems with respect to role performance and communication. Findings from the present study indicate that such difficulties may be less evident during periods when families are working together to solve an absentee problem and during periods when frustration over long-term absenteeism

has led to greater disengagement and less opportunities for direct expression (Kearney and Silverman, 1995).

Family cohesion represented another nuanced finding. Cohesion was not predictive at 1 + % and 3 + % absenteeism but lower standard scores were more predictive of higher levels of absenteeism. This result parallels Bernstein et al.'s (1999) finding that adolescents with school attendance problems and their parents viewed their families as particularly rigid and disengaged on a cohesion dimension. In addition, several researchers have found, broadly speaking, that parent and family involvement and support are crucial variables with respect to school attendance, performance, and dropout (Sheldon, 2007; Topor et al., 2010; Parr and Bonitz, 2015). Cohesion in the form of help with homework, support for academic progress, and commitment to education may be a key in this regard (Wilder, 2014).

Family conflict was expected to be an important predictor of absenteeism severity in the present study. Elevated conflict standard scores were more predictive of 5 + % absenteeism severity, whereas lower conflict standard scores were more predictive of 10 + % absenteeism severity. Some have found family conflict to be elevated in this population in general, and advocate for the problem to be resolved clinically in this population (Kearney and Silverman, 1995; Kearney and Albano, 2018), though others have found family conflict to be unrelated to school attendance problems (McShane et al., 2001). As with expressiveness, some families may display increased conflict at a point of urgency when trying to resolve a school attendance problem but later become frustrated and disengaged from the process (Kearney, 2019).

Finally, control was a family environment variable that did not appear until higher levels of absenteeism severity. Lower levels of control were more predictive at higher levels of absenteeism severity, particularly at the 20 + % and 30 + % levels. A less structured home environment has been associated with school absenteeism in other studies (Hunt and Hopko, 2009). In addition, as mentioned earlier, Bernstein et al. (1990) found that inconsistency of family rules related to some youth with school attendance problems. Conversely, family rules are part of a parent involvement process often associated with academic success (Catsambis, 2001).

Analyses of individual FES items also revealed interesting findings. First, items were sometimes endorsed differently in different nodes, indicating a high level of variability in these groups. This applied particularly to lower levels of absenteeism. Second, fewer items were predictive of 10 + % absenteeism than at lower levels, mirroring the subscale finding that predictors tended to be more restricted at higher absenteeism severity levels. Overall, however, examining subscale scores appeared to be more useful than examining item scores.

The present study may thus have some applicability to MTSS models of school absenteeism and how tiers within these models may be demarcated. In particular, absenteeism severity levels of 10–15% appear to be associated with more defined sets of risk factors, which may indicate more qualitative changes in family functioning at these levels. More intense drops in achievement orientation, active-recreational orientation, cohesion, and expressiveness, in addition to less conflict, may indicate that families become substantially more disengaged at these

levels. Such disengagement could come in the form of sharply reduced parent-school official contact, consequences for school absenteeism, academic assistance, attendance monitoring, and parent supervision (Kearney and Albano, 2018).

The results may also have implications for MTSS development in educational settings. Many local educational agencies, for example, are moving toward systemic, evidence-based systems of academic and behavioral supports to meet the unique needs of diverse students (McIntosh and Goodman, 2016). A better understanding of how these needs intersect with family-based challenges is essential in this respect. Parental involvement, for example, has been found to be a key element of success in MTSS programs, and such programs often benefit from a wider array of stakeholders that include parents (August et al., 2018). In addition, MTSS models are increasingly moving toward a “whole child” approach that more fully considers ecological levels outside of school, such as family factors (Sailor et al., 2018). Results of the present study and related studies may thus help inform such an approach.

Results of the present study also have implications for further research work in this area, particularly with respect to how these findings intersect with other family-based risk factors for school absenteeism. Gubbels et al. (2019), for example, conducted a meta-analytic review of such factors for school absenteeism and dropout and found several pertinent family domains. These included low parental school involvement, lack of nuclear family structure, and low parental control, among others. An understanding of how the family environment dynamics identified in the present study intersect with these broader domains, particularly with respect to specific levels of school absenteeism, would be quite instructive for subtyping and demarcation purposes. Such information may also help inform family-based treatment for this population. For example, Tobias (2019) found that family-based intervention for persistent school absenteeism was often hindered by an insecure home environment. The latter construct could be investigated in greater detail in future work to identify whether the dynamics noted in the present study would apply.

Limitations of the present study should be noted. First, the sample was a diverse one ranging from having no formal school absences to having many school absences. Second, more detailed analyses of absenteeism type or of demographic or developmental differences were not examined in accordance with sample constraints and diversity of settings. Third, the primary dependent measure was based on parent-report. Future researchers should endeavor to explore a more wide-ranging assessment of family functioning in this population.

REFERENCES

- Attwood, G., and Croll, P. (2015). Truancy and well-being among secondary school pupils in England. *Educ. Stud.* 41, 14–28. doi: 10.1080/03055698.2014.955725
- August, G. J., Piehler, T. E., and Miller, F. G. (2018). Getting “SMART” about implementing multi-tiered systems of support to promote school mental health. *J. Sch. Psychol.* 66, 85–96. doi: 10.1016/j.jsp.2017.10.001
- Barber, B. K., and Buehler, C. (1996). Family cohesion and enmeshment: different constructs, different effects. *J. Marriage Fam.* 58, 433–441. doi: 10.2307/353507
- Berk, R. A. (2006). An introduction to ensemble methods for data analysis. *Soc. Methods Res.* 34, 263–295. doi: 10.1177/0049124105283119
- Bernstein, G. A., and Borchardt, C. M. (1996). School refusal: family constellation and family functioning. *J. Anxiety Disord.* 10, 1–19. doi: 10.1016/0887-6185(95)00031-3
- Bernstein, G. A., Garfinkel, B. D., and Borchardt, C. M. (1990). Comparative studies of pharmacotherapy for school refusal. *J. Am. Acad. Child Adolesc. Psychiatry* 29, 773–781. doi: 10.1097/00004583-199009000-00016
- Bernstein, G. A., Warren, S. L., Massie, E. D., and Thuras, P. D. (1999). Family dimensions in anxious-depressed school refusers. *J. Anxiety Disord.* 13, 513–528. doi: 10.1016/S0887-6185(99)00021-3

CONCLUSION

Despite these limitations, findings from the present study may have some clinical implications. Educators, mental health professionals, and others who address these families, particularly at higher levels of absenteeism severity, will likely need to prioritize certain goals given the problematic family dynamics involved. With respect to school attendance, such goals may include repairing parent-school official communications, educating family members about creative educational options, and establishing contracts or agreements to improve problem-solving ability and increase incentives for attending school (Kearney, 2019). More broadly, such goals may include interventions to enhance family engagement and communication as well as contacts with outside sources of support (Kelly et al., 2018).

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by UNLV IRB. Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

AUTHOR CONTRIBUTIONS

All authors revised and approved the submitted version. MF helped collect data, performed the initial analyses, and assisted in the writing of the manuscript. CK helped with data analysis, assisted in the writing of the manuscript, and supervised the study.

FUNDING

This work was supported by the University of Nevada, Las Vegas. A portion of the publication fees for this article were supported by the UNLV University Libraries Open Article Fund.

- Berryhill, M. B., Hayes, A., and Lloyd, K. (2018). Chaotic-enmeshment and anxiety: the mediating role of psychological flexibility and self-compassion. *Contemp. Fam. Ther.* 40, 326–337. doi: 10.1007/s10591-018-9461-2
- Bradley, R. H., Barrett, K. W., Connors-Burrow, N. A., McKelvey, L. M., Whiteside-Mansell, L., and Casey, P. H. (2010). Growing up in violent communities: do family conflict and gender moderate impacts on adolescents' psychosocial development? *J. Abnorm. Child Psychol.* 39, 95–107. doi: 10.1007/s10802-010-9448-4
- Bridgeland, J. M., Dilulio, J. J. Jr., and Morison, K. B. (2006). *The silent epidemic: Perspectives of high school dropouts*. Civic enterprises. Washington, D.C.: Civic Enterprises. Available at: <https://docs.gatesfoundation.org/documents/thesilentepidemic3-06final.pdf> (Accessed June 14, 2019).
- Burrus, J., and Roberts, R. D. (2012). *Dropping out of high school: Prevalence, risk factors, and remediation strategies*. Princeton, NJ: R&D Connections. Available at: https://www.researchgate.net/profile/Richard_Roberts2/publication/233381528_Dropping-out_of_High_School_Prevalence_risk_factors_and_remediation_strategies/links/09e41509e7ca9975a7000000.pdf (Accessed June 14, 2019).
- Burton, C. M., Marshal, M. P., and Chisolm, D. J. (2014). School absenteeism and mental health among sexual minority youth and heterosexual youth. *J. Sch. Psychol.* 52, 37–47. doi: 10.1016/j.jsp.2013.12.001
- Catsambis, S. (2001). Expanding knowledge of parental involvement in children's secondary education: connections with high school seniors' academic success. *Soc. Psychol. Educ.* 5, 149–177. doi: 10.1023/A:1014478001512
- Chen, I. J., Wu, Y., and Wei, B. S. (2017). Effects of anxious emotions on the behavioral problems of Chinese children with learning difficulties. *Qual. Quant.* 51, 1147–1165. doi: 10.1007/s11135-016-0322-5
- Christenson, S. L., and Thurlow, M. L. (2004). School dropouts: prevention considerations, and challenges. *Curr. Dir. Psychol. Sci.* 13, 36–39. doi: 10.1111/j.0963-7214.2004.01301010.x
- Chu, B. C., Guarino, D., Mele, C., O'Connell, J., and Coto, P. (2018). Developing an online early detection system for school attendance problems: results from a research-community partnership. *Cogn. Behav. Pract.* 26, 35–45. doi: 10.1016/j.cbpra.2018.09.001
- Chung, J. Y., and Lee, S. (2019). Dropout early warning systems for high school students using machine learning. *Child Youth Serv. Rev.* 96, 346–353. doi: 10.1016/j.childyouth.2018.11.030
- Coffey, S. E., Stallworth, L., Majors, T., Higgs, K., Gloster, L., Carter, Y., et al. (2018). *Using the cluster support team and multi-tiered systems of support to provide wraparound services in a large urban school district*. Savannah, GA: National Youth-At-Risk Conference, Georgia Southern University. Available at: https://digitalcommons.georgiasouthern.edu/nyar_savannah/2018/2018/18 (Accessed June 14, 2019).
- Conry, J. M., and Richards, M. P. (2018). The severity of state truancy policies and chronic absenteeism. *J. Educ. Stud. Placed Risk* 23, 187–203. doi: 10.1080/10824669.2018.1439752
- Cordero, J. M., Santin, D., and Simancas, R. (2017). Assessing European primary school performance through a conditional nonparametric model. *J. Oper. Res. Soc.* 68, 364–376. doi: 10.1057/jors.2015.42
- Dahl, P. (2016). Factors associated with truancy: Emerging adults' recollections of skipping school. *J. Adolesc. Res.* 31, 119–138. doi: 10.1177/0743558415587324
- Davies, P. T., Cummings, E. M., and Winter, M. A. (2004). Pathways between profiles of family functioning, child security in the interparental subsystem, and child psychological problems. *Dev. Psychopathol.* 16, 525–550. doi: 10.1017/S0954579404004651
- De Witte, K., Cabus, S., Thyssen, G., Groot, W., and Van Den Brink, H. M. (2013). A critical review of the literature on school dropout. *Educ. Res. Rev.* 10, 13–28. doi: 10.1016/j.edurev.2013.05.002
- DePaoli, J. L., Fox, J. H., Ingram, E. S., Maushard, M., Bridgeland, J. M., and Balfanz, R. (2015). *Building a grad nation: Progress and challenge in ending the high school dropout epidemic. Annual update*. Washington, D.C.: Civic Enterprises, 2015. Available at: <https://www.americaspromise.org/building-grad-nation-report> (Accessed June 14, 2019).
- Dubow, E. F., Boxer, P., and Huesmann, L. R. (2009). Long-term effects of parents' education on children's educational and occupational success. *Merrill-Palmer Q.* 55, 224–249. doi: 10.1353/mpq.0.0030
- Eagle, J. W., Dowd-Eagle, S. E., Snyder, A., and Holtzman, E. G. (2015). Implementing a multi-tiered system of support (MTSS): collaboration between school psychologists and administrators to promote systems-level change. *J. Educ. Psychol. Consult.* 25, 160–177. doi: 10.1080/10474412.2014.929960
- Elliott, J. G., and Place, M. (2019). School refusal: developments in conceptualisation and treatment since 2000. *J. Child Psychol. Psychiatry* 60, 4–15. doi: 10.1111/jcpp.12848
- Epstein, J. L., and Sheldon, S. B. (2002). Present and accounted for: improving student attendance through family and community involvement. *J. Educ. Res.* 95, 308–318. doi: 10.1080/00220670209596604
- Freeman, J., and Simonsen, B. (2015). Examining the impact of policy and practice interventions on high school dropout and school completion rates: a systematic review of the literature. *Rev. Educ. Res.* 85, 205–248. doi: 10.3102/0034654314554431
- Freeman, J., Simonsen, B., McCoach, D. B., Sugai, G., Lombardi, A., and Horner, R. (2016). Relationship between school-wide positive behavior interventions and supports and academic, attendance, and behavior outcomes in high schools. *J. Posit. Behav. Interv.* 18, 41–51. doi: 10.1177/1098300715580992
- Gentle-Genitty, C., Karikari, L., Chen, H., Wilka, E., and Kim, J. (2015). Truancy: a look at definitions in the USA and other territories. *Educ. Stud.* 41, 62–90. doi: 10.1080/03055698.2014.955734
- Gubbels, J., van der Put, C. E., and Assink, M. (2019). Risk factors for school absenteeism and dropout: a meta-analytic review. *J. Youth Adolesc.* 48, 1637–1667. doi: 10.1007/s10964-019-01072-5
- Hansen, C., Sanders, S. L., Massaro, S., and Last, C. G. (1998). Predictors of severity of absenteeism in children with anxiety-based school refusal. *J. Clin. Child Adolesc. Psychol.* 27, 246–254. doi: 10.1207/s15374424jccp2703_2
- Harrison, J., and Rouse, P. (2014). Competition and public high school performance. *Socio-Econ. Plan. Sci.* 48, 10–19. doi: 10.1016/j.seps.2013.11.002
- Havik, T., Bru, E., and Ertesvåg, S. K. (2015). School factors associated with school refusal and truancy-related reasons for school non-attendance. *Soc. Psychol. Educ.* 18, 221–240. doi: 10.1007/s11218-015-9293-y
- Hill, N. E., and Taylor, L. C. (2004). Parental school involvement and children's academic achievement: pragmatics and issues. *Curr. Dir. Psychol. Sci.* 13, 161–164. doi: 10.1111/j.0963-7214.2004.00298.x
- Hunt, M. K., and Hopko, D. R. (2009). Predicting high school truancy among students in the Appalachian South. *J. Prim. Prev.* 30, 549–567. doi: 10.1007/s10935-009-0187-7
- Ingul, J. M., Havik, T., and Heyne, D. (2019). Emerging school refusal: a school-based framework for identifying early signs and risk factors. *Cogn. Behav. Pract.* 26, 46–62. doi: 10.1016/j.cbpra.2018.03.005
- Ingul, J. M., Klöckner, C. A., Silverman, W. K., and Nordahl, H. M. (2012). Adolescent school absenteeism: modelling social and individual risk factors. *Child Adolesc. Ment. Health* 17, 93–100. doi: 10.1111/j.1475-3588.2011.00615.x
- Jaycox, L. H., and Repetti, R. L. (1993). Conflict in families and the psychological adjustment of preadolescent children. *J. Fam. Psychol.* 7, 344–355. doi: 10.1037/0893-3200.7.3.344
- Kearney, C. A. (2008). An interdisciplinary model of school absenteeism in youth to inform professional practice and public policy. *Educ. Psychol. Rev.* 20, 257–282. doi: 10.1007/s10648-008-9078-3
- Kearney, C. A. (2016). *Managing school absenteeism at multiple tiers: An evidence-based and practical guide for professionals*. Oxford, UK: Oxford University Press.
- Kearney, C. A. (2019). *Helping families of youth with school attendance problems: A practical guide for mental health and school-based professionals*. New York: Oxford University Press.
- Kearney, C. A., and Albano, A. M. (2018). *When children refuse school: Therapist guide*. New York: Oxford University Press.
- Kearney, C. A., and Graczyk, P. (2014). A response to intervention model to promote school attendance and decrease school absenteeism. *Child Youth Care Forum* 43, 1–25. doi: 10.1007/s10566-013-9222-1
- Kearney, C. A., and Silverman, W. K. (1995). Family environment of youngsters with school refusal behavior: a synopsis with implications for assessment and treatment. *Am. J. Fam. Ther.* 23, 59–72. doi: 10.1080/01926189508251336
- Kelly, J., Rossen, E., and Cowan, K. C. (2018). Supporting families to support students. *Educ. Leadersh.* 75, 62–69. doi: 10.4324/9780203417003-13
- Lagana, M. T. (2004). Protective factors for inner-city adolescents at risk of school dropout: family factors and social support. *Child. Sch.* 26, 211–220. doi: 10.1093/cs/26.4.211
- Lahti, M., Evans, C. B., Goodman, G., Schmidt, M. C., and LeCroy, C. W. (2019). Parents as teachers (PAT) home-visiting intervention: a path to

- improved academic outcomes, school behavior, and parenting skills. *Child Youth Serv. Rev.* 99, 451–460. doi: 10.1016/j.chilyouth.2019.01.022
- Lemon, S., Roy, J., Clark, M., Friedmann, P., and Rakowski, W. (2003). Classification and regression tree analysis in public health: methodological review and comparison with logistic regression. *Ann. Behav. Med.* 26, 172–181. doi: 10.1207/S15324796ABM2603_02
- Lindblom, J., Peltola, M. J., Vänskä, M., Hietanen, J. K., Laakso, A., Tiitinen, A., et al. (2017). Early family system types predict children's emotional attention biases at school age. *Int. J. Behav. Dev.* 41, 245–256. doi: 10.1177/0165025415620856
- Little, S. A., and Garber, J. (2004). Interpersonal and achievement orientations and specific stressors predict depressive and aggressive symptoms. *Int. J. Adolesc. Youth* 19, 63–84. doi: 10.1177/0743558403258121
- Makihara, H., Nagaya, M., and Nakajima, M. (1985). An investigation of neurotic school refusal in one-parent families. *Jpn. J. Child Adols. Psy.* 26, 303–315.
- Maxwell, L. E. (2016). School building condition, social climate, student attendance and academic achievement: a mediation model. *J. Environ. Psychol.* 46, 206–216. doi: 10.1016/j.jenvp.2016.04.009
- Mazerolle, L., Eggins, E., Sydes, M., Hine, L., McEwan, J., Norrie, G., et al. (2018). *Criminal justice responses to domestic and family violence: A rapid review of the evaluation literature*. University of Queensland, Australia: Domestic and Family Violence Review Unit. Available at: https://www.courts.qld.gov.au/_data/assets/pdf_file/0006/586185/systematic-review-of-criminal-justice-responses-to-domestic-and-family-violence.pdf (Accessed June 14, 2019).
- McIntosh, K., and Goodman, S. (2016). *Integrated multi-tiered systems of support: Blending RTI and PBIS*. New York: Guilford.
- McKee, M. T., and Caldarella, P. (2016). Middle school predictors of high school performance: a case study of dropout risk indicators. *Education* 136, 515–529.
- McShane, G., Walter, G., and Rey, J. M. (2001). Characteristics of adolescents with school refusal. *Aust. N. Z. J. Psychiatry* 35, 822–826. doi: 10.1046/J.1440-1614.2001.00955.X
- Moos, R. H. (1990). Conceptual and empirical approaches to developing family-based assessment procedures: resolving the case of the family environment scale. *Fam. Process* 29, 199–208; discussion 209–211. doi: 10.1111/j.1545-5300.1990.00199.x
- Moos, R. H., and Moos, B. S. (2009). *Family environment scale manual and sampler set: Development, applications and research*. Palo Alto, CA: Mind Garden, Inc.
- Parr, A. K., and Bonitz, V. S. (2015). Role of family background, student behaviors, and school-related beliefs in predicting high school dropout. *Am. Educ. Res. J.* 108, 504–514. doi: 10.1080/00220671.2014.917256
- Pullen, P. C., and Kennedy, M. J. (Eds.) (2019). *Handbook of response to intervention and multi-tiered systems of support*. New York: Routledge.
- Ready, P. D. (2010). Leishmaniasis emergence in Europe. *Eur. Secur.* 15:19505. doi: 10.1016/s0140-6736(00)62841-6
- Rocque, M., Jennings, W. G., Pquero, A. R., Ozkan, T., and Farrington, D. P. (2017). The importance of school attendance: findings from the Cambridge study in delinquent development on the life-course effects of truancy. *J. Res. Crime Delinq.* 63, 592–612. doi: 10.1177/001128716660520
- Rosellini, A. J., Dussaillant, F., Zubizarreta, J. R., Kessler, R. C., and Rose, S. (2018). Predicting posttraumatic stress disorder following a natural disaster. *J. Psychiatr. Res.* 96, 15–22. doi: 10.1016/j.jpsychires.2017.09.010
- Sailor, W., McCart, A. B., and Choi, J. H. (2018). Reconceptualizing inclusive education through multi-tiered system of support. *Inc* 6, 3–18. doi: 10.1352/2326-6988-6.1.3
- Sansone, D. (2019). Teacher characteristics, student beliefs, and the gender gap in STEM fields. *Educ. Eval. Policy Anal.* 41, 127–144. doi: 10.3102/0162373718819830
- Sheldon, S. B. (2007). Improving student attendance with school, family, and community partnerships. *J. Educ. Res.* 100, 267–275. doi: 10.3200/JOER.100.5.267-275
- Skedgell, K. K., and Kearney, C. A. (2016). Predictors of absenteeism severity in truant youth: a dimensional and categorical analysis. *Am. Second. Educ.* 45, 46–58. doi: 10.1016/j.chilyouth.2018.01.043
- Skedgell, K. K., and Kearney, C. A. (2018). Predictors of school absenteeism severity at multiple levels: a classification and regression tree analysis. *Child Youth Serv. Rev.* 86, 236–245. doi: 10.1016/j.chilyouth.2018.01.043
- Spruyt, B., Keppens, G., Kemper, R., and Bradt, L. (2016). If only they had a file on every pupil': on the mismatch between truancy policy and practice in Flanders. *Int. J. Soc. Educ.* 26, 171–189. doi: 10.1080/09620214.2016.1191965
- Tobias, A. (2019). A grounded theory study of family coach intervention with persistent school non-attenders. *Educ. Psychol. Pract.* 35, 17–33. doi: 10.1080/02667363.2018.1518215
- Topor, D. R., Keane, S. P., Shelton, T. L., and Calkins, S. D. (2010). Parent involvement and student academic performance: a multiple mediational analysis. *J. Prev. Interv. Community* 38, 183–197. doi: 10.1080/10852352.2010.486297
- Tucker, M. C., and Rodriguez, C. M. (2014). Family dysfunction and social isolation as moderators between stress and child physical abuse risk. *J. Fam. Violence* 29, 175–186. doi: 10.1007/s10896-013-9567-0
- UNESCO (2012). *Education data, UNESCO institute of statistics*. Retrieved March 6, 2019. Available at: <http://www.uis.unesco.org/Education/> (Accessed June 14, 2019).
- Wahler, R. G. (1980). The insular mother: her problems in parent-child treatment. *J. Appl. Behav. Anal.* 13, 207–219. doi: 10.1901/jaba.1980.13-207
- Wang, M. T., and Holcombe, R. (2010). Adolescents' perceptions of school environment, engagement, and academic achievement in middle school. *Am. Educ. Res. J.* 47, 633–662. doi: 10.3102/0002831209361209
- Weiss, M., and Cain, B. (1964). The residential treatment of children and adolescents with school phobia. *Am. J. Orthopsychiatry* 34, 103–114. doi: 10.1111/j.1939-0025.1964.tb02198.x
- Wilder, S. (2014). Effects of parental involvement on academic achievement: a meta-synthesis. *Educ. Rev.* 66, 377–397. doi: 10.1080/00131911.2013.780009

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2019 Fornander and Kearney. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



Reconciling Contemporary Approaches to School Attendance and School Absenteeism: Toward Promotion and Nimble Response, Global Policy Review and Implementation, and Future Adaptability (Part 2)

Christopher A. Kearney^{1*}, Carolina González², Patricia A. Graczyk³ and Mirae J. Fornander¹

¹Department of Psychology, University of Nevada, Las Vegas, Las Vegas, NV, United States, ²Department of Developmental Psychology and Teaching, Universidad de Alicante, San Vicente del Raspeig, Spain, ³Department of Psychiatry, University of Illinois at Chicago, Chicago, IL, United States

OPEN ACCESS

Edited by:

Douglas F. Kauffman,
Medical University of the
Americas – Nevis, United States

Reviewed by:

Gianluca Serafini,
San Martino Hospital (IRCCS), Italy
Nina Klang,
Uppsala University,
Sweden

*Correspondence:

Christopher A. Kearney
chris.kearney@unlv.edu

Specialty section:

This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Psychology

Received: 03 July 2019

Accepted: 04 November 2019

Published: 29 November 2019

Citation:

Kearney CA, González C,
Graczyk PA and Fornander MJ (2019)
Reconciling Contemporary
Approaches to School Attendance
and School Absenteeism: Toward
Promotion and Nimble Response,
Global Policy Review and
Implementation, and Future
Adaptability (Part 2).
Front. Psychol. 10:2605.
doi: 10.3389/fpsyg.2019.02605

As noted in Part 1 of this two-part review, school attendance is an important foundational competency for children and adolescents, and school absenteeism has been linked to myriad short- and long-term negative consequences, even into adulthood. Categorical and dimensional approaches for this population have been developed. This article (Part 2 of a two-part review) discusses compatibilities of categorical and dimensional approaches for school attendance and school absenteeism and how these approaches can inform one another. The article also poses a multidimensional multi-tiered system of supports pyramid model as a mechanism for reconciling these approaches, promoting school attendance (and/or prevention of school absenteeism), establishing early warning systems for nimble response to school attendance problems, assisting with global policy review and dissemination and implementation, and adapting to future changes in education and technology.

Keywords: school attendance, school absenteeism, truancy, school refusal, school withdrawal, school exclusion, multi-tiered system of supports, response to intervention

INTRODUCTION

The field of school attendance and absenteeism (SA/A) remains, as it has always been, at various crossroads. Categorical and dimensional approaches to conceptualizing SA/A are manifold, and each approach has its own validity for defining, classifying, and providing assessment and prevention/intervention recommendations for this population (see Part 1 of this two-part review; Kearney et al., 2019). Categories generally refer to dichotomies and distinctions to identify groups, whereas dimensions generally refer to fluid or latent constructs arranged along various spectra or continua. Key categorical dichotomies and distinctions of SA/A include school

refusal-truancy, excused-unexcused absences, school withdrawal and school exclusion, acute-chronic duration, and diagnostic categories. Key dimensional aspects of SA/A include defining school attendance and its problems along a continuum, multi-tiered system of supports for preventative and intervention strategies arranged according to student need, risk/contextual factors, absenteeism severity, developmental level, and functional profiles of school attendance problems.

The development of categorical and dimensional approaches to better understand a particular phenomenon is not unique to the field of SA/A; indeed, such bifurcation is a common aspect of the study of many different child behavior problems such as anxiety and mood disorders, developmental disorders, and attention-deficit/hyperactivity and conduct disorders (Hankin et al., 2011; Ghio et al., 2015; Wakschlag et al., 2015; Elton et al., 2016; Sprafkin et al., 2016). A key task moving forward will be to draw from the validity of all approaches to design a framework for SA/A that can facilitate the promotion of school attendance, nimble responses to emerging school absenteeism, effective policy review across jurisdictions, wide dissemination to various locations and settings, and adaptation to future, rapid changes in education and technology.

As noted in Part 1 of this review, Coghill and Sonuga-Barke (2012) stated that both categorical and dimensional approaches can coexist within a given phenomenon by serving different but equally useful purposes. Both categorical and dimensional approaches can be applied to a given heterogeneous construct. Categories are useful for providing general rules and cut-points for distinguishing broad groups of behavior, and dimensions are useful for providing data to adjust these cut-points along various spectra such as age, gender, temperament/behavior, developmental level, and setting to improve the categorical rules. Categorical distinctions can be useful descriptors of a particular current state, and dimensional profiles can be used to determine if that categorical state changes in degree of intensity (e.g., to nonproblematic or to more problematic) over time to inform treatment, longitudinal, and prognostic analyses. Categories and dimensions together can thus form a synergistic and breathable system that allows for considerable adaptation to future scientific and other advances (Hudziak et al., 2007).

Over the next sections of this article (Part 2 of a two-part review), we discuss a possible pathway toward reconciling contemporary categorical and dimensional approaches to SA/A. This discussion initially involves sample compatibilities across extant categories and dimensions of SA/A and how these constructs might be blended or matched with one another. This section focuses on pertinent or prominent examples and is not an exhaustive review of all possible affinities. This discussion then includes a multidimensional, multi-tiered system of supports (MTSS) pyramid model that may be used as a framework to include various categorical-dimensional aspects of SA/A. Finally, as mentioned, we explore how such a model could enhance promotion of school attendance and/or prevention of school absenteeism, expedite nimble clinical and other responses to emerging absenteeism *via* early warning system development, assist in policy review and dissemination across jurisdictions and disciplines, and adapt to future and rapid

changes in education and technology. We emphasize that the framework presented here is a heuristic one, not meant to be necessarily optimal or capstone in nature, but rather one designed to help spur the field toward reconciliation, common language, and advancement. We fully expect and hope that the framework will evolve over time.

COMPATIBILITIES OF CATEGORIES AND DIMENSIONS OF SCHOOL ATTENDANCE AND ABSENTEEISM

Compatibilities of categories and dimensions of SA/A (described in Part 1 of this two-part review) can be described in two main ways. First, many categorical approaches for SA/A actually have many dimensional features, and many dimensional approaches for SA/A actually have many categorical features. Second, many categorical and dimensional approaches for SA/A have striking similarities that may indicate general agreement about a particular construct and refer to that construct from somewhat different perspectives. The examples provided next include both ways of describing compatibilities among categories and dimensions of SA/A.

Categories of School Attendance and Absenteeism With Dimensional Features

As mentioned in Part 1 of this review (p. 3), truancy is one of the most venerable constructs in the field of SA/A. From a categorical perspective, truancy may refer to illegal, unexcused school absence without parental knowledge or sanction (Gentle-Genitty et al., 2015). From a dimensional perspective, as noted in Part 1 of this review (p. 4), researchers have found many profiles of truancy along academic status, disability, location, race/ethnicity, in- and out-of-school activities, individual-group-orientation, premediated-spontaneous initiation, and parental academic involvement, among many other variables. Gentle-Genitty et al. (2015) noted as well that categorical definitions of truancy often involve dimensions of absenteeism along time such as arriving late to school, missing a class, and missing a full school day, similar to the definitional spectrum of SA/A presented in Part 1 (p. 7).

Truancy as a category and truancy as a multidimensional construct are compatible notions. A categorical premise of lack of parental knowledge and sanction in truancy, for example, can be informed by various dimensional subtypes to boost its validity and enhance a greater intricacy to this distinction. For example, Keppens and Spruyt (2017) found that parental knowledge of a truant event was a highly nuanced construct that reflected lack of parental knowledge with expectation of parent distress (41.7%), lack of parental knowledge without expectation of parent distress (5.7%), parental knowledge with approval (34.5%), and parental knowledge without approval (18.1%). Truancy as a categorical and dimensional construct is also represented in research regarding forms and functions of SA/A. Researchers who study SA/A categorically generally examine forms of truant behavior such as externalizing problems,

whereas researchers who study SA/A dimensionally generally examine functions or factors that maintain school refusal behavior such as pursuit of tangible rewards outside of school (Haight et al., 2011; Iverson et al., 2018; Walter et al., 2018). Both research avenues, however, gravitate toward older youth with less school-based anxiety (Dembo et al., 2016).

As mentioned in Part 1 of this review (p. 3), school refusal often refers to another child-initiated form of school absenteeism. From a categorical perspective, school refusal may refer to emotional distress and reluctance to attend school (Elliott and Place, 2019). From a dimensional perspective, as noted in Part 1 (p. 4), researchers have found many profiles of school refusal along various spectra (e.g., Finning et al., 2018, 2019). Gallé-Tessonneau and Gana (2018), for example, found several main clusters of youth with school refusal involving anxiety and fear of confrontation, adolescent-parent relationships, interpersonal relationship difficulties, and coping difficulties that associated closely with functional dimensions or profiles. Researchers who study SA/A categorically generally examine forms of behavior such as anxiety, depression, and somatic complaints (Jones et al., 2019). Researchers who study SA/A dimensionally generally examine functions or factors that maintain school refusal behavior such as avoidance of negative affectivity and escape from aversive social and/or evaluative situations (Haight et al., 2011; Richards and Hadwin, 2011). Both research avenues, however, gravitate toward youth with more school-based distress (Havik et al., 2015).

Other categorical constructs for SA/A also have dimensional features. For example, the construct of school withdrawal, or parent-initiated school absenteeism, includes a spectrum of parent behaviors such as knowledge, acquiescence, consent, approval, and accommodation, or more passive to more active responses (Kearney and Albano, 2018; Marin et al., 2019). Similarly, school exclusion or school-initiated absenteeism can involve a spectrum of lawful or unlawful administrative responses such as loss of privileges, early school departure, detention, in-school suspension, out-of-school suspension, restorative or other interventions in another location, alternative educational placement, and expulsion as well as duration of the exclusion (Valdebenito et al., 2018). In addition, Birioukov (2016) sought to reframe the categorical dichotomy of excused-unexcused absences along broader distinctions (i.e., voluntary and involuntary) with varying explanations. Voluntary absence, for example, might encompass more student agency involving spectra along motivation to attend school and perceptions of school as a hostile environment. Involuntary absence might encompass more contextual influences that affect a student's ability to attend school and include spectra along life conditions, opportunities for academic advancement, and access to education (see also Part 1 of this two-part review, p. 5).

Dimensions of School Attendance and Absenteeism With Categorical Features

As mentioned in Part 1 of this review (p. 10), a functional model of school refusal behavior focuses on dimensions or profiles of the relative strength of maintaining factors for school refusal behavior. The model was originally designed as a clinical

strategy to help mental health professionals utilize descriptive and experimental functional analyses to identify a particular prescriptive treatment tailored to these maintaining factors (Kearney and Silverman, 1990). Youth may refuse to attend school to (1) avoid school-based stimuli that provoke a sense of negative affectivity (anxiety and depression), (2) escape from aversive social and/or evaluative situations at school, (3) pursue attention from significant others, and/or (4) pursue tangible rewards outside the school. The functions were based on wide parameters of negative and positive reinforcement (Kearney, 2001).

In this functional model, a dimensional profile of maintaining factors is derived *via* a comprehensive assessment that includes descriptive measures, rating systems, behavioral observations, and formal hypothesis testing, among other means. Some erroneously equate one descriptive instrument with the broader functional model, but the functional distinctions can be measured in many ways to derive detailed and nuanced clinical profiles of each (Kearney and Tillotson, 1998). Indeed, the functional model was specifically designed to be flexibly applied to different clinical and educational settings to account for differences in local practices as well as the heterogeneity of school attendance problems and to enhance the treatment utility of assessment (Nelson-Gray, 2003). With respect to the latter, a primary function based on relative strength to the others may be categorically chosen as a starting point for prescriptive intervention (Kearney and Silverman, 1999). A categorical nature of the functional model is further reflected in research work examining differences between the functions (e.g., Haight et al., 2011). As such, the model is a flexible, prototypical categorical-dimensional approach for SA/A and has been generally utilized and studied in this manner (e.g., Lyon and Cotler, 2009; Gresham et al., 2013; Nuttall and Woods, 2013; Elsherbiny, 2017).

Similarly, a multi-tiered system of supports (MTSS) model of SA/A (see Part 1 of this review, pp. 7–9) involves several dimensional continua with respect to absenteeism chronicity and severity as well as degree of risk and contextual factors generally associated with increasingly higher levels of absenteeism. An MTSS model of SA/A also assumes a spectrum of needed supports for youth and their families ranging from (1) system-wide or universal preventative approaches to (2) targeted interventions for mild to moderate school attendance problems to (3) intensive interventions for chronic and severe absenteeism (Kearney, 2016). The spectrum-based nature of MTSS is designed in part to enhance feasibility for, and thus applicability to, various educational and other settings (Stoiber and Gettinger, 2016).

A key component of MTSS models, however, is a categorical tier-based structure with ostensibly clear demarcations between each level of supports. Specific demarcations are important for understanding when to shift the focus of intervention to a higher (or lower) tier. Within a reading context, for example, standardized assessment protocols may be utilized to identify students with specific comprehension or word decoding problems that warrant Tier 2 or Tier 3 intervention (Leonard et al., 2019). In addition, teacher-based screening and office disciplinary referrals for behavior may indicate a failed intervention and thus a marker for movement to a different tier (Naser et al., 2018). As such, assessment profiles inform movement from one categorical tier to another. With

respect to an MTSS model for SA/A, identifying when a child could move from one tier to another will involve expanded research into tier-based demarcations that may help inform intervention assignment (Fornander and Kearney, 2019a,b, submitted) (see also later sections).

Other dimensions of SA/A, including those within an MTSS model, have been examined categorically as well. Risk and contextual factors of SA/A, for example, are commonly studied or grouped into child-, parent-, family-, peer-, school-, community-, cultural-, and even government-based distinctions, as well as how these distinctions change across locations (Kearney, 2008; Lamb et al., 2010; Correia and Marques-Pinto, 2016; Şahin et al., 2016). Researchers examine these risk factors *via* spectra of accumulated risk as well as *via* statistical modeling to compare the contributed risk of each group (Chen et al., 2016; Goodrich et al., 2017; Chung and Lee, 2019; Sansone, 2019). Similarly, researchers have examined absenteeism severity both as dimensional ranges and as categorical distinctions (Skedgell and Kearney, 2016, 2018; Stempel et al., 2017).

Categories and Dimensions of School Attendance and Absenteeism: Informing One Another

Categorical and dimensional approaches to SA/A have many compatibilities as well as overlapping qualities and purposes. As noted earlier, categorical distinctions of SA/A, which have traditionally suffered from considerable ambiguity and limited construct validity (Part 1 of this review, p. 6), may be better informed by common and empirically based higher-order dimensions. Such dimensions may help identify functional analytic and temporal aspects to improve the practical nature of different categories in clinical and educational practice (Brown and Barlow, 2009). For example, identifying risk or behavioral marker profiles would help improve a distinction between Tier 1 prevention and Tier 2 early intervention (Mitchell et al., 2011). In addition, identifying specific pathognomonic or at least assident features of various SA/A categories may ultimately come from examining ranges or profiles of constructs such as avoidance, emotion regulation, cognitive features, temperament, parent responses, family environment dynamics, association with deviant peers, school climate, and perhaps even biopsychosocial or bioecological aspects (Caron et al., 2006; Rothbart and Posner, 2015; Gottfried and Gee, 2017). In the next section, we posit a multidimensional multi-tiered system of supports pyramid model of SA/A that allows space to explore these research avenues while simultaneously charting preventative and intervention processes for immediate dissemination and implementation.

A MULTIDIMENSIONAL MULTI-TIERED SYSTEM OF SUPPORTS PYRAMID

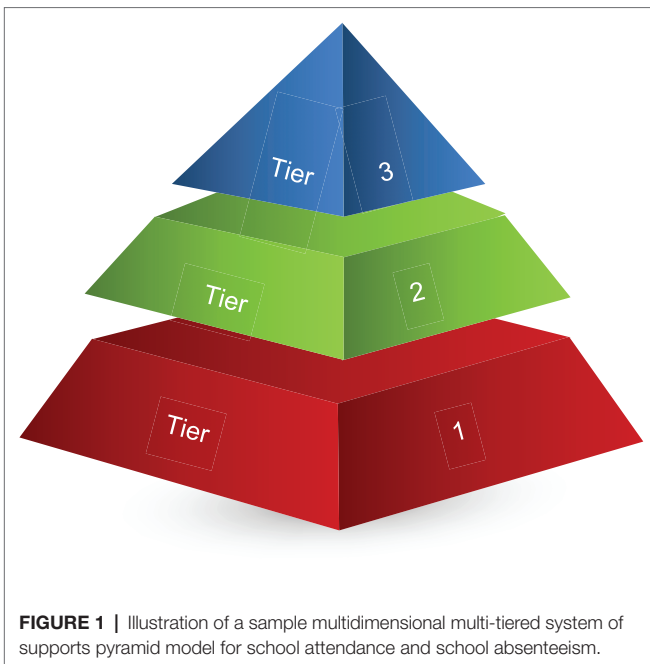
Multi-tiered system of support (MTSS) models, including Response to Intervention and Positive Behavioral Interventions and Supports/School-wide Positive Behavior Support, are often

represented *via* one-dimensional triangles as illustrated in Part 1 of this review (p. 8). As discussed, these approaches represent multiple tiers of preventative and intervention strategies for various academic, social, and behavioral issues. These tiers are arranged along a continuum of needs of support targeted toward all students (prevention), some percentage of students (early intervention), and some lesser percentage of students (intensive intervention). Kearney and Graczyk (2014) were the first to apply these principles to SA/A (see Part 1 of this review for greater detail, pp. 7–9).

A key constraint of the one-dimensional triangle representation of MTSS is that it assumes considerable homogeneity among the population at hand, such as all children in a particular elementary school who are learning to read or all adolescents in a particular high school with a disruptive behavior resulting in an office disciplinary referral (Sugai and Horner, 2009). As such, preventative and intervention strategies are usually geared in similar fashion, albeit with some flexibility based on nuanced factors such as the function of misbehavior, intensity of punitive response, and responding administrator (e.g., teacher and dean) (Crone et al., 2015). Such an approach appears reasonable at Tier 1 where the focus is on promoting a certain phenomenon (e.g., ability to read) and/or preventing a certain phenomenon (e.g., classroom disruption) for all (and generally similar) students in a given setting. The use of communal approaches at Tier 2 and Tier 3, however, may be less efficacious for as heterogeneous and complex a population as students with school attendance problems.

A progressive conceptual framework for an MTSS approach is to emphasize the notion of a multi-dimensional (and thus multi-sided) pyramid to account for greater heterogeneity as well as clinical and research avenues for a certain population (Dulaney et al., 2013). An example is a multi-tiered, multi-domain system of supports (MTMDSS) model (Hatch et al., 2018). In an MTMDSS model, various tiers of support are associated with multiple domains such as school counselor efforts to address, simultaneously and yet differently, the academic, career readiness, and social/emotional needs of their students (Hatch et al., 2019). These tiers of support remain similar to the three levels of an MTSS model but the presence of multiple sides means the tiers can apply variously and flexibly to different domains.

The basic conceptual structure of a multi-dimensional pyramid may fit well with the multifaceted nature of SA/A. In this structure (**Figure 1**), different sides of a multi-dimensional pyramid could reflect different sets of key categorical-dimensional domains of SA/A. Such domains, among many others, could involve (1) child-, parent-, or school-initiated/oriented school attendance problems, (2) different dimensions of categories such as truancy, (3) functional or risk and protective factor profiles or clusters, (4) school attendance problems in preschool, elementary, middle, and high school students, and (5) schools at low, medium, and high risk for absenteeism. In addition, multi-dimensional pyramids could be developed and tailored to individual jurisdictions with different set points for movement across the tiers. Such pyramids would also allow for better cross-disciplinary work and enhance creativity and innovation



about how this population is conceptualized. A multi-dimensional pyramid could vary according to the number of domains desired (e.g., four and six sides) as well. Most importantly, this approach mandates the development of preventative and intervention strategies for each tier no matter what domains are used.

As an example, Lyon and Cotler (2009) juxtaposed functional dimensions along microsystem, mesosystem, and exosystem levels of intervention for school refusal behavior. Microsystem interventions address more direct, proximal, or immediate influences on school attendance problems, and specific aspects within the microsystem can be linked to specific functional dimensions. In this framework, (1) peer microsystem interventions (e.g., mentoring and social skills) might best be linked to avoidance of social/evaluative situations and pursuit of tangible reinforcement; (2) family microsystem interventions (e.g., contingency management and contracting) might best be linked to avoidance of social/evaluative situations, pursuit of parental attention, and pursuit of tangible reinforcement; and (3) school microsystem interventions (e.g., incentive programs and academic support) might best be linked to avoidance of negative affectivity, avoidance of social/evaluative situations, and pursuit of tangible reinforcement.

Mesosystem interventions address connections between settings most relevant to a child such as parent-school official contacts. In this framework, mesosystem interventions (e.g., school engagement and parental involvement initiatives) might best be linked to pursuit of parental attention and pursuit of tangible reinforcement. Exosystem interventions (e.g., policy changes and statutes) address more distal social structures or settings that have an indirect influence on school attendance problems and may best be linked to all functions of school refusal behavior. The authors also discussed macrosystem influences, or societal or cultural/subcultural influences that envelop other levels (in this case, those involving school absenteeism). Such influences

may include, for example, shifts in economic opportunities, globalization, migration/immigration, and labor markets that impact school dropout rates (Brewer and McEwan, 2010; Coxhead and Shrestha, 2017).

Lyon and Cotler's (2009) approach, a key prelude to the multi-tiered frameworks discussed here and in other articles (see also Lyon and Bruns, 2019), emphasized the notion of multifaceted tiers that each reflected multiple domains related to school attendance such as functional profiles, contextual factors, and intervention types and levels. In addition, the authors worked to supersede traditional notions of school refusal and truancy, emphasize how multi-systemic interventions can augment personalized clinical treatment approaches, and encourage the expansion of tailored strategies to best serve different ethnic and cultural groups, a process that remains largely underdeveloped in the SA/A field even today. One omission of Lyon and Cotler's (2009) approach was the notion of preventative practices to proactively address multi-system factors leading to school attendance problems, a topic we turn to next.

Base of the Pyramid: Promoting School Attendance

The notion of a multidimensional MTSS/MTMDSS pyramid model carries some potential advantages as a heuristic for SA/A. First, the notion of a multidimensional pyramid implies a common base involving children and adolescents who are attending school without difficulty. The base of a pyramid is necessarily broad and strong and critical for the support of the upper tiers. As such, the base of the pyramid is the most fundamental aspect of the structure and must be well maintained. The notion of a pyramidal base thus means that all stakeholders in the field of SA/A begin with the common premise that school attendance is valued and that promoting school attendance (and/or preventing school absenteeism) must be the foundation for all other efforts in this area.

Second, the notion of a strong (and larger) pyramidal base means that most efforts in this area will need to focus on promoting school attendance and not simply on reducing absenteeism. With respect to SA/A, this means that school districts, health and mental health professionals, and lay persons must invest significant resources and efforts into Tier 1 practices to prevent youth from entering Tiers 2 and 3. All too often, stakeholders in this field concentrate on policies, procedures, sanctions, treatments, and other methods to react to student absenteeism as opposed to engaging in measures to proactively maintain and boost school attendance. The notion of a multidimensional base means that proactive, preventative efforts must be emphasized and can be tailored to individual schools, jurisdictions, and cultures.

Third, the notion of a strong pyramidal base means that researchers must focus as much on protective and promotional factors toward high school completion (or its equivalent) as on risk factors and other aspects of school absenteeism. Some continue to invest heavily in incremental distinctions of youth with school absenteeism with little investment toward identifying those who do complete school. Indeed, the absence of risk is

not the same as the presence of growth. In addition, many researchers tend to focus on the negative consequences of school absenteeism and dropout and less so on the benefits of graduation. A better understanding of such protective factors would greatly inform prevention science in this and related areas (Kieling et al., 2011; Lösel and Farrington, 2012).

Zaff et al. (2017) reviewed literature on factors that promote high school graduation, with a particular focus on dimensions of positive youth development as well as proximal and distal influences within a student's ecology. Such protective and promotive factors included malleable assets, or those potentially sensitive to intervention, and upstream factors, or those more systemic and likely more difficult to modify. The authors made an astute point that simple lack of risk factors in a particular child does not necessarily imply that the child is thriving or that development is optimized. Instead, researchers and others must focus on variables that actively promote educational attainment, not simply on those that predict school absenteeism and dropout.

Individual student factors found most to predict high school graduation or continued school enrollment included intrinsic motivation to achieve positive educational outcomes, enhanced school engagement, student expectations for academic attainment, and internal locus of control. School engagement can come in many forms, and the authors found that high levels of behavioral (e.g., attending school and completing assignments), emotional (e.g., connection with school and enjoying school), and cognitive (e.g., strategic learning and intellectual curiosity) were most related to academic success and graduation. Of these variables, particularly salient predictors included attendance, social and academic engagement, and arts and athletic participation. Expectations for, and perceived control of, positive academic outcomes were potent predictors as well. Effect sizes were small to moderate.

Parent factors found most to predict high school graduation or continued school enrollment included parental academic involvement and parent-child connection. The former may be associated with attending school-based meetings and conferences, participating in school-based organizations, communicating regularly with school officials, assisting with homework, and setting clear rules about homework and maintaining a good grade point average. Many of these effects remained even after controlling for demographic and school composition variables. Parental social support and regular parent-child communication comprised the parent-child connection construct. Effect sizes for parent influences were generally small. Peer-related factors were more limited and included positive peer norms, or expectations of what behaviors are valued within a particular group of friends. This may include enhanced expectations for maintaining grade point average and for valuing education. Effect sizes for peer influences were generally small.

School-related factors found most to predict high school graduation or continued school enrollment included positive student-teacher relationships, smaller schools, participation in school-based extracurricular activities, and career and technical education. Positive student-teacher relationships can include

respectful interactions, teacher interest in students, and student belief in teacher competence. This may relate to smaller schools as well, where teachers and students may be more knowledgeable of one another. Extracurricular activities, including community service participation, may relate specifically to social competence, educational aspirations, and sense of agency among students. Career and technical education opportunities positively impact continued school enrollment in particular. Effects sizes for school variables ranged from small to large.

Finally, the primary community-related factor found most to predict high school graduation or continued school enrollment was participation in out-of-school time programs, or those collections of programs focused on community service, social-emotional learning, and academic enrichment. The authors concluded that more research is needed on how all of these protective factors interact with one another to enhance the trajectory toward graduation, how the factors operate differently across students and contexts, and how risk and demographic factors moderate the effect of assets to promote graduation (Zaff et al., 2017).

Zaff et al.'s (2017) efforts also reveal the value and utility of examining various key dimensions or domains of functioning to inform categorical distinctions between nonproblematic (Tier 1) school attendance and problematic (Tier 2) school absenteeism, and thus preventative targets. Indeed, effective school dropout prevention programs are often based on dimensions of student engagement with school, parental involvement, and school climate (Wilson et al., 2011). In addition, effective components of programs designed to increase school completion are often arranged in dimensional levels of support that involve students (e.g., academic tutoring, social skills instruction, character development, leadership training, work experience, and attendance incentives), schools (e.g., smaller class sizes, anti-bullying, and wider access to mental health support), and policy changes (e.g., reduced stigmatization and use of exclusionary discipline for absenteeism and support for Tier 1 approaches) (Freudenberg and Ruglis, 2007; Freeman and Simonsen, 2015; Balu and Ehrlich, 2018). Utilizing dimensions or domains of functioning to inform categorical distinctions between nonproblematic (Tier 1) school attendance and problematic (Tier 2) school absenteeism also has implications for early warning systems and nimble clinical and other responses to emerging school attendance problems, discussed next.

Second Tier of the Pyramid: Early Warning and Nimble Response

The notion of a multidimensional MTSS/MTMDSS pyramid model also implies that screening and immediate, nimble response to early warning signs or Tier 2 cases of emerging school absenteeism must be a priority no matter the domain structure utilized on the sides of a pyramid. For example, domains of school attendance problems across elementary, middle, and high school levels must juxtapose with individualized, tailored strategies to identify these problems within the resources and logistical constraints of each domain. This may mean an attendance officer in an elementary school who can call parents immediately each day upon learning of a student absence, a

school attendance team (e.g., counselor, dean, and school-based social worker) in a middle school that regularly reviews attendance data and intervenes with a family prior to a legal tripwire for truancy, and an integrated first period teacher-attendance team in high school that coordinates information about attendance, disciplinary referrals, and course grades (Kearney, 2016; Rumberger and Losen, 2017). The ability to nimbly respond to these problems, particularly in school settings, depends heavily on valid early screening methods for SA/A in children and adolescents.

Screening for school attendance problems has occurred in various ways that include both ancillary and direct approaches. With respect to the former, for example, Gall et al. (2000) described a screening process at a school-based health center that included school absence as well as a number of psychosocial and academic variables. Students identified with emotional and behavioral problems and referred for mental health services decreased their school absences nearly 50% and tardiness instances 25%. Mechanisms of action for this effect may include enhanced resilience and health status and behaviors (Walker et al., 2010). Others have screened for ancillary variables such as office disciplinary referrals or health problems such as asthma as markers for attendance problems (Weismuller et al., 2007; Caldarella et al., 2008; Moricca et al., 2013).

Recent endeavors have focused more on direct screening approaches for school attendance problems that include both categorical and dimensional aspects. Early warning systems that focus specifically on attendance, behavioral data/suspensions, and course grades have been found to consistently identify 50–75% of future school dropouts before the event occurred. These categories have been further informed by dimensional data indicating that attendance rates under 85–90%, two or more suspensions, and two or more semester course failures in any subject are particularly pertinent indicators and should be part of a customized multi-tiered response system (Thomas, 2017; Balfanz and Byrnes, 2019). Such data could be collated *via* an online monitoring system, and many school districts utilize software applications to immediately inform parents of an absence as well as course assignments and grades (e.g., <https://www.infinitecampus.com/audience/parents-students>). Researchers have also utilized text and mobile telephone communications to immediately identify and mitigate school absences (Cook et al., 2017; Smythe-Leistico and Page, 2018) within a dimensional multi-tiered intervention framework.

Other direct screening approaches for school attendance problems focus on spreadsheets listing student demographics, attendance status, behavior, course performance, and interventions (Rumberger and Losen, 2017), brief pediatric consultations (Katz et al., 2016), online self-report methods (Pflug and Schneider, 2016), and checklist methods for categories of absences mixed with level of absenteeism severity (Kearney, 2008; Heyne et al., 2019). A nimble response to a child's absence from school would benefit from immediate knowledge of whether the absence was due to school exclusion such as suspension or alternative educational placement or home instruction, school-based threat such as bullying, parent-based school withdrawal, legitimate reason such as illness or poor

weather, or a child-based anxiety, mood, or conduct problem (Ingul et al., 2019). Basic screening approaches have advantages for limiting the burden on school officials, though early warning systems that are too parsimonious may have limited validity (O'Cummings and Therriault, 2015; Sansone, 2019).

More nuanced early warning systems have thus been developed. Chu et al. (2019) developed an online early detection system for school attendance problems, with a particular focus on teachers, administrative assistants, and school counselors as attendance monitors and trackers. The authors utilized a categorical cutoff of five absences (or 2.78% in a 180-day school year) that included dimensions of absenteeism severity ranging from full days missed to instances of tardiness to early departures from school. School attendance problems were assessed at the end of each of four marking periods throughout the academic year. Yearly absences were more closely associated with an accommodation plan and having a sibling with similar attendance problems. Instances of tardiness were more closely associated with higher grade level, divorced or separated parents, and having a sibling with similar attendance problems. Early departures were more closely associated with male gender, newness to a school, and having a sibling with similar attendance problems.

Several researchers have also recommended machine learning and related predictive modeling methods to study large SA/A-based data sets to help inform such algorithms and early warning systems (do Nascimento et al., 2018). Chung and Lee (2019), for example, utilized random forests in machine learning to predict student dropout among 165,715 Korean students. Key indicators included unauthorized absence, early leave, class absence, and lateness as well as various test scores and school experiences. School dropout was predicted mostly by several risk factors that included all forms of unauthorized school attendance problems. In addition, several protective factors were identified that included self-regulated activity, career development, club activity, and volunteer work. The authors recommended that homeroom teachers utilize such markers to mitigate risk and enhance protective factors *via* appropriate supports and interventions. Indeed, some have advocated for restructuring the role of the homeroom or first-period teacher to quickly identify an absent and transmit the information to a school attendance team member who immediately contacts parents (Lever et al., 2004).

Sansone (2019) also advocated for machine learning approaches to provide algorithms for predicting school dropout among 21,440 ninth-grade students. Key predictors selected by the statistical methods used included age, lack of important math and science courses, grade point average, and whether a student had ever been suspended or expelled from school. Other more secondary predictors included lack of plan to later enroll in college, parent contacted by school about poor attendance, and parent belief that the child will at best attain high school only. The author recommended identifying at-risk students based on these variables to identify effective academic and vocational approaches as well as informing parents of a particular student's risk level. The author concluded as well that early warning systems that are too parsimonious may lack reliability, and that identifying students at less risk for dropout may be as useful as identifying those at high risk.

More specific to school absenteeism, Kearney and colleagues (Kearney, 2018; Skedgell and Kearney, 2018; Fornander and Kearney, 2019a,b, submitted) conducted several studies utilizing ensemble and classification and regression tree (CART) analyses to identify demographic, academic, behavioral, and family factors that best differentiated school absenteeism at various severity levels. Skedgell and Kearney (2018) examined records from 316,004 students across elementary, middle, and high schools to identify academic and demographic variables that best predicted distinctions between <1 and 1+% absenteeism, <10 and 10+% absenteeism, and <15 and 15+% absenteeism based on differentiations sometimes recommended in the literature.

Four predictors that best differentiated youth at <1 and 1+% absenteeism severity levels included ethnicity (Hispanic, African American, Caucasian, biracial, American Indian, or Pacific Islander), grade point average (0.00–2.00), grade level (1, 2, 9, 10, 11, or 12), and Individualized Education Plan (IEP) eligibility. Three predictors that best differentiated youth at <10 and 10+% absenteeism severity levels included age (>15.5 years), ethnicity, and low grade point average. Four predictors that best differentiated youth at <15 and 15+% absenteeism severity levels included age (>16.5 years), ethnicity, low grade point average, and grade level (1, 6, 7, 8, 10, 11, or 12). *Post hoc* analyses were also conducted for developmental school levels. At the elementary school level, ethnicity and grades 1 and 2 were most predictive of all absenteeism severities. At the middle school level, ethnicity and IEP eligibility were most predictive of <1 and 1+% absenteeism, whereas ethnicity was most predictive of the other absenteeism severity levels. At the high school level, low GPA was most predictive of all absenteeism severity levels.

Fornander and Kearney (2019a,b, submitted) further used ensemble and CART analyses to examine predictors of various absenteeism severity levels (1+, 3+, 5+, 10+, 15+, 20+, 30+, 40+%) in youth with school attendance problems referred for clinical services or to a truancy or family court. As with the demographic and academic variables described in the previous study, predictive risk factors tended to be more homogeneous at higher levels of absenteeism severity. These studies included analyses of family environment variables as well as internalizing symptoms of anxiety and depression.

With respect to family environment, higher levels of absenteeism (i.e., 15+%) were more closely related to lower achievement orientation, active-recreational orientation, cohesion, and expressiveness. Many findings were quite nuanced, however. For example, lower expressiveness was evident at less severe (3, 5%) and more severe (20, 30%) levels of absenteeism, though elevated expressiveness was predictive of 10+% absenteeism. In addition, family cohesion was not predictive at 1+ and 3+% absenteeism but less cohesion was more predictive of higher levels of absenteeism. Elevated conflict was more predictive of 5+% absenteeism severity; whereas lower conflict was more predictive of 10+% absenteeism severity. In addition, less family control was more predictive of higher levels of absenteeism severity (20+, 30+%).

With respect to internalizing symptoms, one consistent item that distinguished levels of higher from lower absenteeism severity was a depression item related to lack of enjoyment. Predictive items at 1 and 3% absenteeism were less informative than items at higher absenteeism levels. For example, endorsement of less anxiety was more predictive of higher levels of absenteeism severity, a finding similar to Skedgell and Kearney (2016) who found that very high levels of absenteeism were generally marked by less anxiety. This could mean that extensive absence from school mitigates anxiety at the time of assessment.

The nascent development of valid early warning systems of SA/A (as well as continuous screening devices) has tremendous potential for informing more nimble responses on the part of school officials. This is especially critical now that schools are a primary site of mental health care for most youth (Green et al., 2013; Lyon et al., 2019). Screening devices with set algorithms or rules would allow for nearly simultaneous assessment and intervention, such as quicker use of informed clinical, referral, and other strategies to mitigate emerging school attendance problems. Such devices may also help school officials triage or narrow the focus of these nimble responses, such as toward child, parent, and peer microsystems (Lyon and Cotler, 2009; Kearney, 2019). The studies also reveal a fine line between parsimony and validity, however, meaning that researchers must thread the needle of identifying informative early warning systems that are acceptable and not burdensome to school-based professionals.

Clusters of variables are likely more useful for deriving an algorithm to inform an early warning system for school attendance problems, including for categories of absences, than singular factors such as child internalizing behavior. Indeed, researchers in child psychopathology increasingly use item response theory and signal detection approaches to identify multiple dimensional spectra of normal and abnormal functioning (White et al., 2017; Wakschlag et al., 2019). These approaches would be particularly useful for identifying cutoffs and criteria, transdiagnostic constructs, and multi-system responses (Nigg, 2017) for school attendance problems most pertinent to a specific jurisdiction or culture. Such approaches could also help inform global policy review and dissemination and implementation practices for SA/A, discussed next.

GLOBAL POLICY REVIEW AND DISSEMINATION AND IMPLEMENTATION

One of the most significant challenges for researchers of SA/A has been effective dissemination and implementation of conceptualization, assessment, and intervention approaches into schools, physical and mental health agencies, and the corridors of policy makers. Reasons for this are myriad and may include lack of consensus among scholars, the complexity and heterogeneity of this population, disconnect between disciplines, school resistance, and substantial administrative, logistical, legal, and other restrictions uniquely faced by school officials (Kearney, 2003; Graeff-Martins et al., 2006; Keppens and Spruyt, 2017).

With respect to the latter, for example, many schools have been restricted by zero tolerance laws that mandate specific sanctions for absenteeism that may displace clinical and other approaches (Gage et al., 2013). Exclusionary discipline policies, reporting guidelines, legal definitions of truancy, and disincentives for early school response likely play a role in this process as well (Marchbanks et al., 2015; Brouwer-Borghuis et al., 2019). Of course, many jurisdictions and countries have no legal or other policy regarding school absenteeism whatsoever (UNESCO, 2012). Furthermore, statewide truancy policies appear unrelated to chronic absenteeism levels and may actually be pernicious in that diverse students are subjected to more restrictive policies (Conry and Richards, 2018). Such policies also institutionalize the concept of truancy and thus color approaches taken for the problem (Spruyt et al., 2017).

Markussen and Sandberg (2011) noted that policy measures to address school absenteeism and dropout vary widely across countries, range from considerable to little impact, and are often affected more by economic shifts and labor markets. Still, the authors identified several policy measures across various countries that may have some impact on school absenteeism and dropout at system-wide levels, such as career guidance and counseling, income support for students, and vocational education and alternative educational programs. Markussen and Sandberg (2011) noted that these and other policy measures must be based on a deep understanding of local conditions, including the unique attributes of those with school absenteeism and dropout, as well as on a common commitment to develop better theory for addressing these issues within the context of each country. Global policy review with respect to school absenteeism must therefore focus on pruning counterproductive measures in addition to disseminating and implementing theoretical models that can be uniquely tailored to cross-cultural settings.

A multidimensional multi-tiered system of supports pyramid model of SA/A could be one such vehicle for policy review and dissemination. The model is consistent with whole-school reform models of education and eschews policies and practices that focus on exclusionary discipline (and unlawful school exclusion), immediate referrals to legal and other outside agencies, tacit acceptance of low-performing students who leave school, inflexible curricula, and rigid standardized testing (Kearney, 2016). In addition, the model and associated algorithms can be flexibly and practically tailored to idiosyncratic differences related to local norms, calendars, and educational practices. The model is designed to be inclusive, simple, and easily adaptable to extant modes of service delivery in schools, which are key parameters of successful dissemination and implementation (Lyon and Bruns, 2019). In addition, the multidimensional model may be well positioned because it can dovetail with (1) already existing school-based multi-tier frameworks devoted to academic performance, school climate/positive school culture, social and emotional competencies, and career readiness and (2) functional behavioral assessment practices, both of which are already understood and utilized by many school officials (Freeman and Simonsen, 2015; Eklund et al., 2019).

Lyon and colleagues (Cook et al., 2019; Lyon et al., 2019) iteratively adapted implementation strategies and recommendations from the healthcare sector to create a common nomenclature for such strategies that would be relevant to the educational sector. A total of 75 unique implementation strategies were compiled into several larger conceptual categories, which could apply generally to programs designed to promote school attendance and/or curb absenteeism (Lyon and Cotler, 2009). A full explication of these categories is beyond the scope of this article, but especially pertinent categories are briefly summarized next vis-à-vis a multidimensional model of SA/A.

One set of adaptations, “use evaluative and iterative strategies,” referred in part to understanding the unique aspects of a given school context to identify potential barriers to implementation (and which school officials can best facilitate implementation), execute changes incrementally, establish clear goals and outcomes, develop monitoring systems with fidelity, obtain student and family feedback, and adjust practices as needed. Perhaps the most common school-based barriers to MTSS-based models include lack of daily and consistent use as well as poor linkage of data with action (Leonard et al., 2019). A multidimensional multi-tiered system of supports pyramid model of SA/A can be, however, amenable to simple feedback mechanisms, reliance on data-based decision-making, incremental employment within each tier, multiple stakeholder involvement, and consultation practices that may erode such barriers (Forman and Crystal, 2015; Scott et al., 2019). In addition, many clinical procedures to address school absenteeism at Tier 2 can be adaptively administered by school-based social workers, psychologists, and counselors (Kearney, 2018, 2019).

Other sets of adaptations, “provide interactive assistance” and “adapt and tailor to context,” referred in part to using a centralized system within a district to assist in implementation, pair school personnel together, identify ways a new practice can best be adapted to a given school context, utilize experts to inform implementation efforts, and integrate educational and administrative data across schools. A key advantage of a multidimensional multi-tiered system of supports pyramid model of SA/A is that many schools already utilize MTSS or related tier-based principles as a centralized system and may thus be more equipped and willing to absorb school attendance/absenteeism into their frameworks. Use of student review boards, district-wide task forces, and similar existing mechanisms at the system level for truancy may be helpful in this regard as well (Bye et al., 2010). In addition, MTSS models of SA/A rely on attendance teams involving multiple school officials that can be informed by research-based findings (e.g., early warning systems and tier demarcations) described in this review (Kearney, 2016). Others have also appealed for better sharing of attendance and graduation rates across schools in a given district to identify which contexts have been more successful with respect to school completion and how certain practices can be extrapolated (DePaoli et al., 2015).

Other sets of adaptations, “develop stakeholder interrelationships,” “support clinicians,” and “engage consumers” referred in part to developing partnerships internal and external to a school (e.g., university and school board) for training purposes, adding different

disciplines as needed, providing real-time data regarding student outcomes, constructing educational materials regarding new practices, engaging with families to become active participants, and utilizing media to reach large numbers of people. MTSS models commonly employ school-community/research partnerships involving varied professionals from mental health and youth-serving systems (Weist et al., 2018). In addition, Chu et al. (2019) recommended the use of researcher-designed, publically available platforms for deriving real-time attendance and related data that could be available to districts nationally and internationally. Many schools are also moving toward more standardized data collection systems with respect to basic performance outcomes (e.g., attendance, office disciplinary referrals, and course grades) in conjunction with new federal mandates (Egalite et al., 2017). As noted earlier, MTSS models also rely heavily on family and student engagement practices as well as educating parents about relevant school district policies regarding attendance and available resources (Kearney and Graczyk, 2014; Kearney, 2016).

Successful dissemination and implementation strategies for SA/A will likely have to include some level of absorption into what schools are already doing to address social, emotional, and behavioral competencies. Many/most schools already emphasize measurement, functional behavioral assessment, feasible multi-tiered approaches, and performance and student outcomes related to attendance, discipline, and academic progression (Lyon and Bruns, 2019). Schools are often motivated as well in an era of linked funding and mandates to improve attendance and graduation rates (DePaoli et al., 2018). In addition, school-based professionals often coordinate efforts with mental health, medical, legal, social service, and other outside agencies to help implement wide-ranging approaches for SA/A (Kearney, 2016). Successful dissemination and implementation strategies for SA/A will also have to involve adaptation to future changes in education and technology, a topic discussed next.

ADAPTABILITY TO THE FUTURE OF EDUCATION AND TECHNOLOGY

One of the biggest challenges for educators, researchers, clinicians, and others who study and address SA/A will be massive and rapid changes in education and technology over the next several decades. Any SA/A model will thus need to be pliable enough to be adapted not only to different cultures and countries but also to broad, systemic trends. This section discusses expected future trends in education and technology and then how a multidimensional, multi-tiered systems of support model for SA/A could be adapted. For brevity purposes, we group these trends into two broad categories: competency-based education and virtual learning (Kearney, 2016).

Competency-based education refers generally to mastery of academic and related material based on key benchmarks, and at a variable pace and timeline, rather than a strict focus on formal in-seat class time, examination scores, and credit accrual (Colby, 2017). Many schools in different countries have moved, or are moving toward, more holistic models of education that

emphasize comprehension, innovation, conceptual connections, and critical thinking skills rather than simple recall and procedural steps (Jukes and Schaaf, 2019). In these authentic or ubiquitous learning environments, students are more apt to engage in project-, portfolio-, experiential-, and service-based activities to solve real-world problems, conduct experiments, interpret findings and literature, and make recommendations and presentations rather than simply taking multiple-choice tests, for example (Virtanen et al., 2018). Many such environments also emphasize personalized, customized learning and curricula, including core social and behavioral competencies, for preparing individualized adult and career readiness plans (Ekstrand, 2015; Taylor et al., 2017).

Virtual learning generally refers to online programming to deliver academic coursework and content (Brinson, 2015). Virtual learning environments are increasingly common at high school and postsecondary levels of education, but all future learning environments are expected to have at least some virtual component over the next several decades (Miron and Gulosino, 2016). Virtual learning environments can range in scope from adjunctive to hybrid to immersive in nature. An adjunctive scope may involve the introduction of greater technology into traditional classroom settings (e.g., game-based student-teacher interactions *via* tablets or smartphones; a hybrid or blended scope may combine online learning with direct (in-person) instructor contact; an immersive scope may involve a wholly digital network rather than a physical space that includes students from many different locations) (Hainey et al., 2016; Boelens et al., 2017; Xie et al., 2019). Virtual learning environments, particularly immersive ones, can also vary with respect to time of individual and group work and perhaps be modified more quickly *via* learning analytics than traditional classrooms (Williamson, 2017).

Future trends in education and technology have serious ramifications for contemporary SA/A models. Researchers' traditional focus on outcomes such as percentage time missed from school as well as on concepts such as truancy or reluctance to attend school will need to be reconfigured in light of increasingly decentralized approaches to learning. In related fashion, researchers and others will likely need to reconsider traditional grade-level systems and academic calendars as schools increasingly modify the pace at which individual students learn, accrue credits (if relevant), and graduate.

A multidimensional multi-tiered system of supports model may be adaptable to these changes in education and technology. Indeed, various Tier 3 approaches for students largely disconnected or disengaged from school often focus on virtual, hybrid, project-based, and credit recovery and personalized learning approaches to provide alternative or blended pathways to adult and career readiness. In addition, many dimensional constructs associated with SA/A can dovetail with more dimensional aspects of the educational experience, including those linked to competencies, progression, completion, skill, and readiness for career paths. Finally, the model posed in this review is atheoretical, independent of academic timeline, and dexterous and malleable enough to accommodate rapid growth and immediate level change. Perhaps most importantly,

the model emphasizes the promotion of school attendance and education in some form, an ever-present goal for all in this field.

CONCLUSION

School attendance and school absenteeism remain important avenues of focus for many different professionals across education, mental health, public policy, and myriad other areas. As noted in Part 1 of this two-part review, though meant to be comprehensive, this article focused on the primary methods of differentiating school attendance problems. Many nuanced distinctions based on multilevel and other statistical modeling should be noted, and many special circumstances such as intense school violence, extreme poverty, and geopolitical factors likely override the distinctions mentioned here. However, the main goal was to provide a heuristic model to help spur the field toward reconciliation, common language, and advancement while considering important aspects of prevention and intervention, particularly within schools.

REFERENCES

- Balfanz, R., and Byrnes, V. (2019). "Early warning indicators and early intervention systems: state of the field" in *Handbook of student engagement interventions: Working with disengaged students*. eds. J. A. Fredricks, A. L. Reschly, and S. L. Christenson (London: Elsevier), 45–56.
- Balu, R., and Ehrlich, S. B. (2018). Making sense out of incentives: a framework for considering the design, use, and implementation of incentives to improve attendance. *JESPAR* 23, 93–106. doi: 10.1080/10824669.2018.1438898
- Birioukov, A. (2016). Beyond the excused/unexcused absence binary: classifying absenteeism through a voluntary/involuntary absence framework. *Educ. Rev.* 68, 340–357. doi: 10.1080/00131911.2015.1090400
- Boelens, R., De Wever, B., and Voet, M. (2017). Four key challenges to the design of blended learning: a systematic literature review. *Educ. Res. Rev.* 22, 1–18. doi: 10.1016/j.edurev.2017.06.001
- Brewer, D. J., and McEwan, P. J. (eds.) (2010). *Economics of education*. San Diego: Elsevier.
- Brinson, J. R. (2015). Learning outcome achievement in non-traditional (virtual and remote) versus traditional (hands-on) laboratories: a review of the empirical research. *Comput. Educ.* 87, 218–237. doi: 10.1016/j.compedu.2015.07.003
- Brouwer-Borghuis, M. L., Heyne, D., Sauter, F. M., and Scholte, R. H. (2019). The link: an alternative educational program in the Netherlands to reengage school-refusing adolescents with schooling. *Cogn. Behav. Pract.* 26, 75–91. doi: 10.1016/j.cbpra.2018.08.001
- Brown, T. A., and Barlow, D. H. (2009). A proposal for a dimensional classification system based on the shared features of the DSM-IV anxiety and mood disorders: implications for assessment and treatment. *Psychol. Assess.* 21, 256–271. doi: 10.1037/a0016608
- Bye, L., Alvarez, M. E., Haynes, J., and Sweigart, C. E. (2010). *Truancy prevention and intervention: A practical guide*. Oxford: New York.
- Caldarella, P., Young, E. L., Richardson, M. J., Young, B. J., and Young, K. R. (2008). Validation of the systematic screening for behavior disorders in middle and junior high school. *J. Emot. Behav. Disord.* 16, 105–117. doi: 10.1177/1063426607313121
- Caron, A., Weiss, B., Harris, V., and Catron, T. (2006). Parenting behavior dimensions and child psychopathology: specificity, task dependency, and interactive relations. *J. Clin. Child Adolesc. Psychol.* 35, 34–45. doi: 10.1207/s15374424jccp3501_4
- Chen, C. C., Culhane, D. P., Metraux, S., Park, J. M., and Venable, J. C. (2016). The heterogeneity of truancy among urban middle school students: a latent class growth analysis. *J. Child Fam. Stud.* 25, 1066–1075. doi: 10.1007/s10826-015-0295-3
- Chu, B. C., Guarino, D., Mele, C., O'Connell, J., and Coto, P. (2019). Developing an online early detection system for school attendance problems: results from a research-community partnership. *Cogn. Behav. Pract.* 26, 35–45. doi: 10.1016/j.cbpra.2018.09.001
- Chung, J. Y., and Lee, S. (2019). Dropout early warning systems for high school students using machine learning. *Child Youth Serv. Rev.* 96, 346–353. doi: 10.1016/j.childyouth.2018.11.030
- Coghill, D., and Sonuga-Barke, E. J. S. (2012). Annual research review: categories versus dimensions in the classification and conceptualisation of child and adolescent mental disorders - implications of recent empirical study. *J. Child Psychol. Psychiatry* 53, 469–489. doi: 10.1111/j.1469-7610.2011.02511.x
- Colby, R. L. (2017). *Competency-based education: A new architecture for K-12 schooling*. Cambridge: Harvard.
- Conry, J. M., and Richards, M. P. (2018). The severity of state truancy policies and chronic absenteeism. *JESPAR* 23, 187–203. doi: 10.1080/10824669.2018.1439752
- Cook, P. J., Dodge, K. A., Gifford, E. J., and Schulting, A. B. (2017). A new program to prevent primary school absenteeism: results of a pilot study in five schools. *Child Youth Serv. Rev.* 82, 262–270. doi: 10.1016/j.childyouth.2017.09.017
- Cook, C. R., Lyon, A. R., Locke, J., Waltz, T., and Powell, B. J. (2019). Adapting a compilation of implementation strategies to advance school-based implementation research and practice. *Prev. Sci.* 20, 914–935. doi: 10.1007/s11211-019-01017-1
- Correia, K., and Marques-Pinto, A. (2016). "Giant leap 1": a social and emotional learning program's effects on the transition to first grade. *Child Youth Serv. Rev.* 61, 61–68. doi: 10.1016/j.childyouth.2015.12.002
- Coxhead, I., and Shrestha, R. (2017). Globalization and school-work choices in an emerging economy: Vietnam. *Asian Econ. Pap.* 16, 28–45. doi: 10.1162/ASEP_a_00515
- Crone, D. A., Hawken, L. S., and Horner, R. H. (2015). *Building positive behavior support systems in schools: Functional behavioral assessment*. New York: Guilford.
- Dembo, R., Wareham, J., Schmeidler, J., and Winters, K. C. (2016). Exploratory two-level analysis of individual-and school-level factors on truant youth emotional/psychological functioning. *J. Educ. Res.* 109, 596–607. doi: 10.1080/00220671.2014.1002881
- DePaoli, J. L., Balfanz, R., Atwell, M. N., and Bridgeland, J. (2018). *Building a grad nation: Progress and challenge in raising high school graduation rates*. Washington, D.C.: Civic Enterprises. Available at: <http://new.every1graduates>.

AUTHOR CONTRIBUTIONS

All authors (CK, CG, PG, and MF) contributed to the writing and editing of the manuscript.

FUNDING

This work was supported by the UNLV Lied Library.

- org/wp-content/uploads/2018/06/18930_Civic_BGN_v7.pdf (Accessed June 14, 2019).
- DePaoli, J. L., Fox, J. H., Ingram, E. S., Maushard, M., Bridgeland, J. M., and Balfanz, R. (2015). Building a grad nation: progress and challenge in ending the high school dropout epidemic. Annual Update 2015. *Civic Enterprises*. Available at: <https://www.civillc.com/> (Accessed June 14, 2019).
- do Nascimento, R. L. S., das Neves Junior, R. B., de Almeida Neto, M. A., and de Araújo Fagundes, R. A. (2018). Educational data mining: an application of regressors in predicting school dropout. *International Conference on Machine Learning and Data Mining in Pattern Recognition*. Paper presented at the 2018 Machine Learning and Data Mining meeting. New York City: USA.
- Dulaney, S. K., Hallam, P. R., and Wall, G. (2013). Superintendent perceptions of multi-tiered systems of support (MTSS): obstacles and opportunities for school system reform. *AASA J. Scholarship Pract.* 10, 30–45. Available at: https://www.aasa.org/uploadedFiles/Publications/Journals/AASA_Journal_of_Scholarship_and_Practice/JSP_Summer2013.FINAL.pdf
- Egalite, A. J., Fusarelli, L. D., and Fusarelli, B. C. (2017). Will decentralization affect educational inequity? The every student succeeds act. *Educ. Adm. Q.* 53, 757–781. doi: 10.1177/0013161X17735869
- Eklund, K., Kilgus, S. P., Taylor, C., Allen, A., Meyer, L., Izumi, J., et al. (2019). Efficacy of a combined approach to Tier 2 social-emotional and behavioral intervention and the moderating effects of function. *Sch. Mental Health* 1–14. doi: 10.1007/s12310-019-09321-5
- Ekstrand, B. (2015). What it takes to keep children in school: a research review. *Educ. Rev.* 67, 459–482. doi: 10.1080/00131911.2015.1008406
- Elliott, J. G., and Place, M. (2019). School refusal: developments in conceptualisation and treatment since 2000. *J. Child Psychol. Psychiatry* 60, 4–15. doi: 10.1111/jcpp.12848
- Elsherbiny, M. M. (2017). Using a preventive social work program for reducing school refusal. *Child. Sch.* 39, 81–88. doi: 10.1093/cs/cdx005
- Elton, A., Di Martino, A., Hazlett, H. C., and Gao, W. (2016). Neural connectivity evidence for a categorical-dimensional hybrid model of autism spectrum disorder. *Biol. Psychiatry* 80, 120–128. doi: 10.1016/j.biopsych.2015.10.020
- Finning, K., Ukoumunne, O. C., Ford, T., Danielson-Waters, E., Shaw, L., Romero De Jager, I., et al. (2019). Review: the association between anxiety and poor attendance at school – a systematic review. *Child Adolesc. Mental Health* 24, 205–216. doi: 10.1111/camh.12322
- Finning, K., Ukoumunne, O. C., Ford, T., Danielsson-Waters, E., Shaw, L., De Jager, I. R., et al. (2018). The association between child and adolescent depression and poor attendance at school: a systematic review and meta-analysis. *J. Affect. Disord.* 245, 928–938. doi: 10.1186/s13643-017-0523-6
- Forman, S. G., and Crystal, C. D. (2015). Systems consultation for multitiered systems of supports (MTSS): implementation issues. *J. Educ. Psychol. Consult.* 25, 276–285. doi: 10.1080/10474412.2014.963226
- Fornander, M. J., and Kearney, C. A. (2019a). Family environment variables as predictors of school absenteeism severity at multiple levels: ensemble and classification and regression tree analysis. *Front. Psychol.* 10:2381. doi: 10.3389/fpsyg.2019.02381
- Freeman, J., and Simonsen, B. (2015). Examining the impact of policy and practice interventions on high school dropout and school completion rates: a systematic review of the literature. *Rev. Educ. Res.* 85, 205–248. doi: 10.3102/0034654314554431
- Freudenberg, N., and Ruglis, J. (2007). Reframing school dropout as a public health issue. *Prev. Chronic Dis.* 4:A107
- Gage, N. A., Sugai, G., Lunde, K., and DeLoreto, L. (2013). Truancy and zero tolerance in high school: does policy align with practice? *Educ. Treat. Child.* 36, 117–138. doi: 10.1353/etc.2013.0011
- Gall, T. L., Evans, D. R., and Bellerose, S. (2000). Transition to first-year university: patterns of change in adjustment across life domains and time. *J. Soc. Clin. Psychol.* 19, 544–567. doi: 10.1521/jscp.2000.19.4.544
- Gallé-Tessonneau, M., and Gana, K. (2018). Development and validation of the school refusal evaluation scale for adolescents. *J. Pediatr. Psychol.* 44, 153–163. doi: 10.1093/jpepsy/jsy061
- Gentle-Genitty, C., Karikari, I., Chen, H., Wilka, E., and Kim, J. (2015). Truancy: a look at definitions in the USA and other territories. *Educ. Stud.* 41, 62–90. doi: 10.1080/03055698.2014.955734
- Ghio, L., Gotelli, S., Cervetti, A., Respino, M., Natta, W., Marcenaro, M., et al. (2015). Duration of untreated depression influences clinical outcomes and disability. *J. Affect. Disord.* 175, 224–228. doi: 10.1016/j.jad.2015.01.014
- Goodrich, L. G. W., Castellano, J. M., and Stefos, E. (2017). An analysis of the social profile of 15 to 17 year old students in Ecuador regarding secondary school attendance and truancy. *European Stud. Rev.* 9, 91–105. doi: 10.5539/res.v9n2p91
- Gottfried, M. A., and Gee, K. A. (2017). Identifying the determinants of chronic absenteeism: a bioecological systems approach. *Teach. Coll. Rec.* 119, n7.
- Graeff-Martins, A. S., Oswald, S., Comassetto, J. O., Kieling, C., Gonçalves, R. R., and Rohde, L. A. (2006). A package of interventions to reduce school dropout in public schools in a developing country. *Eur. Child Adolesc. Psychiatry* 15, 442–449. doi: 10.1007/s00787-006-0555-2
- Green, J. G., McLaughlin, K. A., Alegria, M., Costello, E. J., Gruber, M. J., Hoagwood, K., et al. (2013). School mental health resources and adolescent mental health service use. *J. Am. Acad. Child Adolesc. Psychiatry* 52, 501–510. doi: 10.1016/j.jaac.2013.03.002
- Gresham, F. M., Vance, M. J., Chenier, J., and Hunter, K. (2013). “Assessment and treatment of deficits in social skills functioning and social anxiety in children engaging in school refusal behaviors” in *Handbook of assessing variants and complications in anxiety disorders*. eds. D. McKay and E. A. Storch (New York: Springer), 15–28.
- Haight, C., Kearney, C. A., Hendron, M., and Schafer, R. (2011). Confirmatory analyses of the school refusal assessment scale-revised: replication and extension to a truancy sample. *J. Psychopathol. Behav. Assess.* 33, 196–204. doi: 10.1007/s10862-011-9218-9
- Hainey, T., Connolly, T. M., Boyle, E. A., Wilson, A., and Razak, A. (2016). A systematic literature review of games-based learning empirical evidence in primary education. *Comput. Educ.* 102, 202–223. doi: 10.1016/j.compedu.2016.09.001
- Hankin, A., Hertz, M., and Simon, T. (2011). Impacts of metal detector use in schools: insights from 15 years of research. *J. Sch. Health* 81, 100–106. doi: 10.1111/j.1746-1561.2010.00566.x
- Hatch, T., Duarte, D., and De Gregorio, L. K. (2018). *Hatching results for elementary school counseling: Implementing core curriculum and other tier one activities*. Thousand Oaks: Corwin.
- Hatch, T., Triplett, W., Duarte, D., and Gomez, V. (2019). *Hatching results for secondary school counseling: Implementing core curriculum, individual student planning, and other tier one activities*. Thousand Oaks: Corwin.
- Havik, T., Bru, E., and Ertesvåg, S. K. (2015). Assessing reasons for school non-attendance. *Scand. J. Educ. Res.* 59, 316–336. doi: 10.1080/00313831.2014.904424
- Heyne, D., Gren-Landell, M., Melvin, G., and Gentle-Genitty, C. (2019). Differentiation between school attendance problems: why and how? *Cogn. Behav. Pract.* 26, 8–34. doi: 10.1016/j.cbpra.2018.03.006
- Hudziak, J. J., Achenbach, T. M., Althoff, R. R., and Pine, D. S. (2007). A dimensional approach to developmental psychopathology. *Int. J. Methods Psychiatr. Res.* 16, S16–S23. doi: 10.1002/mpr.217
- Ingul, J. M., Havik, T., and Heyne, D. (2019). Emerging school refusal: a school-based framework for identifying early signs and risk factors. *Cogn. Behav. Pract.* 26, 46–62. doi: 10.1016/j.cbpra.2018.03.005
- Iverson, A., French, B. F., Strand, P. S., Gotch, C. M., and McCurley, C. (2018). Understanding school truancy: risk-need latent profiles of adolescents. *Assessment* 25, 978–987. doi: 10.1177/1073191116672329
- Jones, A. M., West, K. B., and Suveg, C. (2019). Anxiety in the school setting: a framework for evidence-based practice. *Sch. Ment. Heal.* 11, 4–14. doi: 10.1007/s12310-017-9235-2
- Jukes, I., and Schaaf, R. L. (2019). *A brief history of the future of education: Learning in the age of disruption*. Thousand Oaks: Corwin.
- Katz, F., Leith, E., and Paliokosta, E. (2016). Fifteen-minute consultation for a child not attending school: a structured approach to school refusal. *Arch. Dis. Child. Educ. Pract. Ed.* 101, 21–25. doi: 10.1136/archdischild-2013-304055
- Kearney, C. A. (2001). *School refusal behavior in youth: A fundamental approach to assessment and treatment*. Washington, DC: American Psychological Association.
- Kearney, C. A. (2003). Bridging the gap among professionals who address youths with school absenteeism: overview and suggestions for consensus. *Prof. Psychol. Res. Pract.* 34, 57–65. doi: 10.1037/0735-7028.34.1.57
- Kearney, C. A. (2008). An interdisciplinary model of school absenteeism in youth to inform professional practice and public policy. *Educ. Psychol. Rev.* 20, 257–282. doi: 10.1007/s10648-008-9078-3

- Kearney, C. A. (2016). *Managing school absenteeism at multiple tiers: An evidence-based and practical guide for professionals*. Oxford: New York.
- Kearney, C. A. (2018). *Helping school refusing children and their parents: A guide for school based professionals*. 2nd Edn. New York: Oxford.
- Kearney, C. A. (2019). *Helping families of youth with school attendance problems: A practical guide for mental health and school-based professionals*. Oxford: New York.
- Kearney, C. A., and Albano, A. M. (2018). *When children refuse school: Therapist guide*. Oxford: New York.
- Kearney, C. A., González, C., Graczyk, P. A., and Fornander, M. (2019). Reconciling contemporary approaches to school attendance and school absenteeism: toward promotion and nimble response, global policy review and implementation, and future adaptability (part 1). *Front. Psychol.* 10:2222. doi: 10.3389/fpsyg.2019.02222
- Kearney, C. A., and Graczyk, P. (2014). A response to intervention model to promote school attendance and decrease school absenteeism. *Child Youth Care Forum* 43, 1–25. doi: 10.1007/s10566-013-9222-1
- Kearney, C. A., and Silverman, W. K. (1990). A preliminary analysis of a functional model of assessment and treatment for school refusal behavior. *Behav. Modif.* 14, 340–366. doi: 10.1177/01454455900143007
- Kearney, C. A., and Silverman, W. K. (1999). Functionally based prescriptive and nonprescriptive treatment for children and adolescents with school refusal behavior. *Behav. Ther.* 30, 673–695. doi: 10.1016/S0005-7894(99)80032-X
- Kearney, C. A., and Tillotson, C. A. (1998). "School attendance" in *Handbook of child behavior therapy*. eds. T. S. Watson and F. M. Gresham (New York: Plenum), 143–161.
- Keppens, G., and Spruyt, B. (2017). Towards a typology of occasional truancy: an operationalisation study of occasional truancy in secondary education in Flanders. *Res. Pap. Educ.* 32, 121–135. doi: 10.1080/02671522.2015.1136833
- Kieling, C., Baker-Henningham, H., Belfer, M., Conti, G., Ertem, I., Omigbodun, O., et al. (2011). Child and adolescent mental health worldwide: evidence for action. *Lancet* 378, 1515–1525. doi: 10.1016/S0140-6736(11)60827-1
- Lamb, S., Markussen, E., Teese, R., Sandberg, N., and Polesel, J. (eds.) (2010). *School dropout and completion: International comparative studies in theory and policy*. Netherlands: Springer Science & Business Media.
- Leonard, K. M., Coyne, M. D., Oldham, A. C., Burns, D., and Gillis, M. B. (2019). Implementing MTSS in beginning reading: tools and systems to support schools and teachers. *Learn. Disabil. Res. Pract.* 34, 110–117. doi: 10.1111/ldrp.12192
- Lever, N. A., Stephan, S. H., Axelrod, J., and Weist, M. D. (2004). Fee-for-service revenue for school mental health through a partnership with an outpatient mental health center. *J. Sch. Health* 74, 91–94. doi: 10.1111/j.1746-1561.2004.tb04210.x
- Lösel, F., and Farrington, D. P. (2012). Direct protective and buffering protective factors in the development of youth violence. *Am. J. Prev. Med.* 43, S8–S23. doi: 10.1016/j.amepre.2012.04.029
- Lyon, A. R., and Bruns, E. J. (2019). User-centered redesign of evidence-based psychosocial interventions to enhance implementation - hospitable soil or better seeds? *JAMA Psychiatry* 76, 3–4. doi: 10.1001/jamapsychiatry.2018.3060
- Lyon, A. R., Cook, C. R., Locke, J., Davis, C., Powell, B. J., and Waltz, T. J. (2019). Importance and feasibility of an adapted set of implementation strategies in schools. *J. Sch. Psychol.* 76, 66–77. doi: 10.1016/j.jsp.2019.07.014
- Lyon, A. R., and Cotler, S. (2009). Multi-systemic intervention for school refusal behavior: integrating approaches across disciplines. *Adv. Sch. Mental Health* 2, 20–34. doi: 10.1080/1754730X.2009.9715695
- Marchbanks, M. P. III, Blake, J. J., Booth, E. A., Carmichael, D., Seibert, A. L., and Fabelo, T. (2015). "The economic effects of exclusionary discipline on grade retention and high school dropout" in *Closing the school discipline gap: Equitable remedies for excessive exclusion*. ed. D. J. Losen (New York: Columbia), 59–74.
- Marin, C. E., Anderson, T., Lebowitz, E. R., and Silverman, W. K. (2019). Parental predictors of school attendance difficulties in children referred to an anxiety disorders clinic. *Eur. J. Dev. Psychol.* 12, 31–46. doi: 10.30552/ejep.v12i1.239
- Markussen, E., and Sandberg, N. (2011). "Policies to reduce school dropout and increase completion" in *School dropout and completion*. eds. S. Lamb, E. Markussen, R. Teese, N. Sandberg, and J. Polesel (Dordrecht: Springer), 391–406.
- Miron, G., and Gulosino, C. (2016). *Virtual schools report 2016: Directory and performance review*. Boulder: National Education Policy Center. Available at: <http://nepc.colorado.edu/publication/virtual-schools-annual-2016>.
- Mitchell, B. S., Stormont, M., and Gage, N. A. (2011). Tier two interventions implemented within the context of a tiered prevention framework. *Behav. Disord.* 36, 241–261. doi: 10.1177/019874291103600404
- Moricca, M. L., Grasska, M. A., BMarthaler, M., Morpew, T., Weismuller, P. C., and Galant, S. P. (2013). School asthma screening and case management: attendance and learning outcomes. *J. Sch. Nurs.* 29, 104–112. doi: 10.1177/1059840512452668
- Naser, S., Brown, J., and Verlenden, J. (2018). The utility of universal screening to guide school based prevention initiatives: comparison of office discipline referrals to standardized emotional and behavioral risk screening. *Contemp. Sch. Psychol.* 22, 424–434. doi: 10.1007/s40688-018-0173-2
- Nelson-Gray, R. O. (2003). Treatment utility of psychological assessment. *Psychol. Assess.* 15, 521–531. doi: 10.1037/1040-3590.15.4.521
- Nigg, J. T. (2017). Annual research review: on the relations among self-regulation, self-control, executive functioning, effortful control, cognitive control, impulsivity, risk-taking, and inhibition for developmental psychopathology. *J. Child Psychol. Psychiatry* 58, 361–383. doi: 10.1111/jcpp.12675
- Nuttall, C., and Woods, K. (2013). Effective intervention for school refusal behaviour. *Educ. Psychol. Pract.* 29, 347–366. doi: 10.1080/02667363.2013.846848
- O'Cummings, M., and Theriault, S. B. (2015). From accountability to prevention: early warning systems put data to work for struggling students. Available at: <https://files.eric.ed.gov/fulltext/ED576665.pdf> (Accessed June 14, 2019).
- Pflug, V., and Schneider, S. (2016). School absenteeism: an online survey via social networks. *Child Psychiatry Hum. Dev.* 47, 417–429. doi: 10.1007/s10578-015-0576-5
- Richards, H. J., and Hadwin, J. A. (2011). An exploration of the relationship between trait anxiety and school attendance in young people. *Sch. Ment. Heal.* 3, 236–244. doi: 10.1007/s12310-011-9054-9
- Rothbart, M. K., and Posner, M. I. (2015). "Temperament, attention, and developmental psychopathology" in *Developmental psychopathology. Volume 2: Developmental neuroscience*, 2nd Edn. eds. D. Cicchetti and D. J. Cohen (New York: Wiley), 465–501.
- Rumberger, R. W., and Losen, D. J. (2017). The hidden costs of California's harsh school discipline: and the localized economic benefits from suspending fewer high school students. Available at: <https://files.eric.ed.gov/fulltext/ED573326.pdf> (Accessed June 14, 2019).
- Şahin, Ş., Arseven, Z., and Kılıç, A. (2016). Causes of student absenteeism and school dropouts. *Int. J. Instr.* 9, 195–210. doi: 10.12973/iji.2016.9115a
- Sansone, D. (2019). Beyond early warning indicators: high school dropout and machine learning. *Oxford Bull. Econ. Stat.* 81, 0305–0949. doi: 10.1111/obes.12277
- Scott, T. M., Gage, N. A., Hirn, R. G., Lingo, A. S., and Burt, J. (2019). An examination of the association between MTSS implementation fidelity measures and student outcomes. *Prev. Sch. Fail.* 63, 308–316. doi: 10.1080/1045988x.2019.1605971
- Skedgell, K. K., and Kearney, C. A. (2016). Predictors of absenteeism severity in truant youth: a dimensional and categorical analysis. *Am. Second Ed.* 45, 46–58. doi: 10.1016/j.childyouth.2018.01.043
- Skedgell, K., and Kearney, C. A. (2018). Predictors of school absenteeism severity at multiple levels: a classification and regression tree analysis. *Child Youth Serv. Rev.* 86, 236–245. doi: 10.1016/j.childyouth.2018.01.043
- Smythe-Leistico, K., and Page, L. C. (2018). Connect-text: leveraging text-message communication to mitigate chronic absenteeism and improve parental engagement in the earliest years of schooling. *J. Educ. Stud. Placed Risk* 23, 139–152. doi: 10.1080/10824669.2018.1434658
- Sprafkin, J., Steinberg, E. A., Gadow, K. D., and Drabick, D. A. (2016). Agreement among categorical, dimensional, and impairment criteria for ADHD and common comorbidities. *J. Atten. Disord.* 20, 665–673. doi: 10.1177/1087054712475083
- Spruyt, B., Keppens, G., Kemper, R., and Bradt, L. (2017). 'If only they had a file on every pupil': on the mismatch between truancy policy and practice in Flanders. *Int. Stud. Sociol. Educ.* 26, 171–189. doi: 10.1080/09620214.2016.1191965
- Stempel, H., Cox-Martin, M., Bronsert, M., Dickinson, L. M., and Allison, M. A. (2017). Chronic school absenteeism and the role of adverse childhood experiences. *Acad. Pediatr.* 17, 837–843. doi: 10.1016/j.acap.2017.09.013
- Stoiber, K. C., and Gettinger, M. (2016). "Multi-tiered systems of support and evidence-based practices" in *Handbook of response to intervention*.

- eds. S. Jimerson, M. K. Burns, and A. M. VanDerHeyden (Boston, MA: Springer), 121–141.
- Sugai, G., and Horner, R. H. (2009). Responsiveness-to-intervention and school-wide positive behavior supports: integration of multi-tiered system approaches. *Exceptionality* 17, 223–237. doi: 10.1080/09362830903235375
- Taylor, R. D., Oberle, E., Durlak, J. A., and Weissberg, R. P. (2017). Promoting positive youth development through school-based social and emotional learning interventions: a meta-analysis of follow-up effects. *Child Dev.* 88, 1156–1171. doi: 10.1111/cdev.12864
- Thomas, J. M. (2017). Early truancy evaluation: replication of an evaluation using a regression discontinuity design. *Child Youth Serv. Rev.* 78, 150–160. doi: 10.1016/j.childyouth.2017.05.020
- UNESCO (2012). Education data, UNESCO institute of statistics. Available at: <http://www.uis.unesco.org/Education/> (Accessed June 14, 2019).
- Valdebenito, S., Eisner, M., Farrington, D. P., Ttofi, M. M., and Sutherland, A. (2018). School based interventions for reducing disciplinary school exclusion: a systematic review. *Campbell Syst. Rev.* 14, i–216. doi: 10.4073/csr.2018.1
- Virtanen, M. A., Haavisto, E., Liikanen, E., and Kääriäinen, M. (2018). Ubiquitous learning environments in higher education: a scoping literature review. *Educ. Inf. Technol.* 23, 985–998. doi: 10.1007/s10639-017-9646-6
- Wakschlag, L. S., Estabrook, R., Petittler, A., Henry, D., Burns, J. L., Perlman, S. B., et al. (2015). Clinical implications of a dimensional approach: the normal: abnormal spectrum of early irritability. *J. Am. Acad. Child Adolesc. Psychiatry* 54, 626–634. doi: 10.1016/j.jaac.2015.05.016
- Wakschlag, L. S., Roberts, M. Y., Flynn, R. M., Smith, J. D., Krogh-Jespersen, S., Kaat, A. J., et al. (2019). Future directions for early childhood prevention of mental disorders: A road map to mental health, earlier. *J. Clin. Child Adolesc. Psychol.* 48, 539–554. doi: 10.1080/15374416.2018.1561296
- Walker, S. C., Kerns, S. E., Lyon, A. R., Bruns, E. J., and Cosgrove, T. J. (2010). Impact of school-based health center use on academic outcomes. *J. Adolesc. Health* 46, 251–257. doi: 10.1016/j.jadohealth.2009.07.002
- Walter, D., von Bialy, J., von Wirth, E., and Doepfner, M. (2018). Psychometric properties of the German school refusal assessment scale-revised. *J. Psychoeduc. Assess.* 36, 644–648. doi: 10.1177/0734282916689641
- Weismuller, P. C., Grasska, M. A., Alexander, M., White, C. G., and Kramer, P. (2007). Elementary school nurse interventions: attendance and health outcomes. *J. Sch. Nurs.* 23, 111–118. doi: 10.1177/10598405070230020901
- Weist, M. D., Eber, L., Horner, R., Splett, J., Putnam, R., Barrett, S., et al. (2018). Improving multitiered systems of support for students with “internalizing” emotional/behavioral problems. *J. Posit. Behav. Interv.* 20, 172–184. doi: 10.1177/1098300717753832
- White, M., O’Connell, M. A., and Cameron, F. J. (2017). Clinic attendance and disengagement of young adults with type 1 diabetes after transition of care from pediatric to adult services (TrACeD): a randomised, open-label, controlled trial. *Lancet Child Adolesc. Health* 1, 274–283. doi: 10.1016/S2352-4642(17)30089-5
- Williamson, B. (2017). *Big data in education: The digital future of learning, policy and practice*. Thousand Oaks: Sage.
- Wilson, S. J., Tanner-Smith, E. E., Lipsey, M. W., Steinka-Fry, K., and Morrison, J. (2011). Dropout prevention and intervention programs: effects on school completion and dropout among school-aged children and youth. *Campbell Syst. Rev.* 2011, 8. doi: 10.4073/csr.2011.8
- Xie, H., Chu, H. C., Hwang, G. J., and Wang, C. C. (2019). Trends and development in technology-enhanced adaptive/personalized learning: a systematic review of journal publications from 2007 to 2017. *Comput. Educ.* 140:103599. doi: 10.1016/j.compedu.2019.103599
- Zaff, J. F., Donlan, A., Gunning, A., Anderson, S. E., McDermott, E., and Sedaca, M. (2017). Factors that promote high school graduation: a review of the literature. *Educ. Psychol. Rev.* 29, 447–476. doi: 10.1007/s10648-016-9363-5

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2019 Kearney, González, Graczyk and Fornander. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



Measuring School Absenteeism: Administrative Attendance Data Collected by Schools Differ From Self-Reports in Systematic Ways

Gil Keppens^{1*}, Bram Spruyt¹ and Jonas Dockx²

¹ Research Group TOR, Department of Sociology, Vrije Universiteit Brussel, Brussels, Belgium, ² Centre for Educational Effectiveness and Evaluation, Faculty of Psychology and Educational Sciences, KU Leuven, Leuven, Belgium

OPEN ACCESS

Edited by:

Alyse Jordan,
Arizona State University, United States

Reviewed by:

Mari Hysing,
University of Bergen, Norway
Frans Feron,
Maastricht University, Netherlands

*Correspondence:

Gil Keppens
Gil.Keppens@vub.be

Specialty section:

This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Psychology

Received: 26 June 2019

Accepted: 06 November 2019

Published: 03 December 2019

Citation:

Keppens G, Spruyt B and
Dockx J (2019) Measuring School
Absenteeism: Administrative
Attendance Data Collected by
Schools Differ From Self-Reports
in Systematic Ways.
Front. Psychol. 10:2623.
doi: 10.3389/fpsyg.2019.02623

In order to use attendance monitoring within an integrative strategy for preventing, assessing and addressing cases of youth with school absenteeism, we need to know whether the attendance data collected by schools cover all students with (emerging) school attendance problems (SAPs). The current article addresses this issue by comparing administrative attendance data collected by schools with self-reported attendance data from the same group of students (age 15–16) in Flanders, the Dutch-speaking part of Belgium ($N = 4344$). We seek to answer the following question: does an estimation of unauthorized absenteeism based on attendance data as collected by schools through electronic registration differ from self-reported unauthorized absenteeism and, if so, are the differences between administrative and self-reported unauthorized absenteeism systematic? Our results revealed a weak association between self-reported unauthorized school absenteeism and registered unauthorized school absenteeism. Boys, students in technical and vocational tracks and students who speak a foreign language at home, with a less-educated mother and who receive a school allowance, received more registered unauthorized absences than they reported themselves. In addition, pupils with school refusal and who were often authorized absent from school received more registered unauthorized absences compared to their self-reported unauthorized school absenteeism. In the discussion, we elaborate on the implications of our findings.

Keywords: school attendance problems, early identification, truancy, school refusal, school withdrawal, attendance data

INTRODUCTION

School absenteeism is a serious problem among youth. Youth with *school attendance problems* (SAPs) report lower academic efficacy, poorer academic performances, more anxiety, more symptoms of depression and less self-esteem (Kearney, 2008; Reid, 2014). In addition, school absenteeism is often embedded in a broader pattern of social deviant behavior: youth with attendance problems have an increased risk of stealing, getting involved in vandalism and are more likely to partake in behaviors at the risk of their health (e.g., smoking, substance use; Maynard et al., 2012; Reid, 2014). These specific problems may in turn reinforce long-term SAP and give rise to a vicious circle eventually increasing the risk of early school leaving and later unemployment

(Archambault et al., 2009; Rumberger, 2011; Cabus and De Witte, 2015). Hence, early identification of youths with relatively new absentee problems is paramount to prevent more severe and enduring SAPs (Kearney and Graczyk, 2014; Ingul et al., 2019).

In order to optimize identification of youth with (relatively new) absentee problems, many countries invest in attendance monitoring through centralized student management systems. Daily monitoring of students' attendance is used to ensure fast detection and to enable schools to adopt strategies to intervene when youth have emerging SAPs. More recently, it has been emphasized that in order to maximize early identification of attendance problems, schools need to make better use of their data by also analyzing their collected attendance data (Reid, 2014; Kearney, 2016; Chu et al., 2019). Reid (2014), for example, stresses that an analysis of school attendance data enables schools to identify the causes and school-specific issues of absenteeism. Attendance data can be produced weekly, monthly or yearly and can indicate trends between classes and types of attendance (e.g., seasonal attendance, luxury absenteeism). By using this information, schools can optimize early interventions and create tailor-made strategies. Similarly, Chu et al. (2019) assert that actively analyzing attendance data enables schools to provide attendance feedback to key stakeholders such as students, parents, and counselors. Accordingly, they can use this data to create individualized intervention plans for students or use the data as part of comprehensive school interventions. The extent to which schools maximize the potential of attendance data, however, depends on certain preconditions. This obviously includes the degree of data literacy of the school actors involved (Mandinach, 2012), but also a good understanding of the collected data. Understanding the nature of absenteeism at a school is a crucial first step to appoint more targeted, individualized interventions. To ensure that this process runs efficiently, however, it is important to assess whether certain groups of students are more or less likely to be present in these registration data, compared to information they report themselves. Indeed, in order to apply attendance monitoring within an integrative strategy for preventing, assessing and addressing cases of youth with school absenteeism (cf. Kearney, 2016), we need to know whether the attendance data collected by schools covers all students with (emerging) SAPs.

This article contributes to the aforementioned literature by comparing administrative attendance data collected by schools with self-reported attendance data from the *same* group of students in Flanders, the Dutch-speaking part of Belgium ($N = 4344$). As far as we know, this study is novel in investigating this relationship. The key questions concern whether an estimation of unauthorized absenteeism based on attendance data as collected by schools through electronic registration differs from self-reported unauthorized absenteeism. And if so, whether any differences between administrative and self-reported unauthorized absenteeism are systematic? In other words, are there specific groups of students who are systematically under or overrepresented according to the chosen measurement technique? The latter would indicate that certain types of (emerging) SAPs are more or less prevalent in administrative attendance data when compared to self-reported data.

STRENGTHS AND LIMITATIONS OF ADMINISTRATIVE AND SELF-REPORT ATTENDANCE DATA

School absenteeism is generally measured by means of one out of three different types of data collection strategies: surveys, registration data from school administration or through secondary sources (parents, peers). In this study we focus on self-reported school absenteeism and administrative school attendance data. This section briefly reviews the strengths and limitations of both measurement techniques. Rather than providing a general overview of the strengths and limitations of the data types, we primarily aim to inventory reasons to expect that attendance data as collected by schools (will not) cover *all* students with (emerging) SAPs. This focus on registration data is justified by the fact if schools aim to include data in their school policies, they are most likely to rely on registration data. Furthermore, we want to know which *specific groups* of students are more or less likely to be present according to the measurement technique.

Administrative Data on School Attendance

Analyses on administrative data of school attendance rely on absences that are recorded by the school staff. In most countries, teachers register school attendance for all students per lesson or per (half) school day. Attendance is monitored by administrative assistants who define whether an absence is (un)authorized and notify school counselors when students exceed a certain threshold of unauthorized absences. Obviously, only those absences that are effectively detected by the school (and defined as unauthorized) are included in administrative data. One strength of administrative data is that they are collected for all students. This implies, for example, that unlike self-reported survey data (see next section), administrative data on school attendance also contains information on groups of students who represent only a very small percentage of the total student population (i.e., students with a specific ethnic background or special needs). Nevertheless, administrative data suffer from at least two limitations.

First, in certain situations, a registered unauthorized absence has little to do with a young person not going to school while having the opportunity to do so. This concerns, for example, absences due to illness which are not justified through a doctor's note and/or parental consent for the absence. In particular, the latter might apply to children living in low income households due to the financial costs of medical consultation. In such cases, administrative school attendance data are likely to overestimate the level of unauthorized absences from school in a non-random way.

Secondly, there are also indications that official statistics underestimate the amount of absenteeism which is taking place in schools because certain categories of absenteeism remain undetected or are falsely reported as authorized. The first category concerns pre-planned school absenteeism during specific lessons or with specific teachers for which the risk of

getting caught is known to be limited. In this context, Reid (1999) distinguishes between specific lessons absenteeism and post-registration truancy. Specific lesson absenteeism refers to the chronic skipping of a specific subject area due to content or the instructor. According to Reid (1999), specific lesson absences originate from a negative student-teacher relationship or dislike of the subject. Keppens and Spruyt (2016, 2017a) argue that it may also be due to an estimated low probability of getting caught whereby some students take advantage of teachers who are sloppier in the registration of absences. Post-registration truancy refers to truancy that occurs *after* students are registered as being present at school (O'Keefe, 1993; Reid, 1999; Keppens and Spruyt, 2016). Hence, post-registration truancy can be considered a specific type of pre-planned specific lesson absence.

A second category of a type of school absenteeism that is more likely to be registered as an authorized absence from school is due to parental consent for the absence. In the first place, this concerns school withdrawal, defined by Heyne et al. (2019, p. 23) as an absence which is (a) not concealed from the parent(s) and (b) attributable to active parental effort to keep the young person at home, or little or no parental effort to get the young person to school. Absenteeism with parents' knowledge but not consent is called school refusal. The latter refers to a refusal to attend school (a) in conjunction with emotional distress, (b) with parents' knowledge, (c) without display of antisocial behavior or (d) when parents have made reasonable efforts or express their intention to secure attendance at school (Heyne et al., 2019, pp. 22–23).

Self-Reported Attendance Data

In the literature, school absenteeism is most often measured through self-reported data (Maynard et al., 2012; Havik et al., 2015; Keppens and Spruyt, 2016), irrespective of whether it is combined with reports from the parents (Kearney and Silverman, 1993; Kearney, 2002). In these studies, young people themselves indicate whether or not they missed school. One of the main strengths of the self-report method is the capacity to investigate the etiology of school absenteeism by means of collecting comprehensive information on individual, familial, school and societal characteristics and influences. The self-report method allows differentiation between different types (e.g., truancy, school refusal, specific lesson absence, school withdrawal), and reasons for (the maintenance of) SAPs (Kearney, 2007; Keppens and Spruyt, 2016; Heyne et al., 2019). This enables one to grasp certain types of school absenteeism (e.g., pre-planned truancy, school refusal) which are difficult to detect in registration data. Hence, one could argue that the measurement of school absenteeism through the self-report method complements administrative school attendance data. However, authors also indicate that self-reported measures of school absenteeism are plagued with a number of problems, resulting in under- or over-reporting.

First, measuring unauthorized school absenteeism through the self-report method may introduce problems because the aim is to gauge behavior that is deviant or delinquent. For example, truancy, defined by Heyne et al. (2019, p. 23) as an absence which occurs (a) when a young person is absent from school for an entire day or part of the day, or at school but absent from

the proper location, (b) without the permission of the school authorities and (c) when the young person tries to conceal the absence from their parents, is considered a status offense (Zhang et al., 2007). Hence, respondents are more likely to conceal or fail to recall their truancy out of fear of the consequences, resulting in an underestimation of the actual truancy rate. In this context, research suggests that this underestimation is structurally higher among ethnic minority youth (Kirk, 2006; van Batenburg-Eddes et al., 2012). For example, a Dutch study investigating the discrepancy between self-reported juvenile delinquency and official police statistics found that, in particular, Moroccan youth are less inclined to admit delinquent behavior. The study also showed that this is due to (a) discrimination by the police and (b) a higher level of suspicion toward the authorities due to higher feelings of stigmatization (van Batenburg-Eddes et al., 2012). The same reasoning may apply to the self-reporting of unauthorized absenteeism, and particularly truancy. Zhang (2003), for example, problematizes the subjectivity in authorizing absences since the attendance regulations stipulate that it is up to the school staff to decide which absence should be authorized. In these circumstances, it is plausible that certain students (whose school absenteeism is accompanied by other school misbehavior) or certain types of absences (truancy) are more easily registered as unauthorized than others. Skiba et al. (2011), for example, show that ethnic minorities in the United States are more likely to be referred for truancy as compared to their white peers (African American youths in grade 6 to 9 are 4.40 times more likely to be referred for truancy than their white peers; Hispanic/Latino youth in grade 6 to grade 9 are 2.44 times more likely to be referred for truancy than their white peers). Skiba et al. (2011) also demonstrated that ethnic minorities are more likely than their white peers to receive expulsion or out of school suspension as a consequence of referred truancy. Hence, ethnic minorities might (compared to their peers without a migration background) be overrepresented in administrative data on absenteeism because of discrimination by the school staff. However, at the same time, ethnic minorities might also be underrepresented in the self-reported school absenteeism data due to feelings of suspicion toward the school authorities when filling in self-reported questionnaires on deviant behavior.

A second limitation of the self-report technique is that it relies on students' recollections of their absenteeism and this might undermine the reliability of the data. This applies in particular to self-report measures that rely on longer time frames. The longer this period, the greater the chance that the self-reported absenteeism will deviate from the real absenteeism rate (Stone et al., 2000; Kirk, 2006). However, it should also be noted that self-reported measures that use a shorter reference period to measure absenteeism (for example, 2 weeks) may lead to an underestimation of school absenteeism. When the reference period is short, there will likely be an underreporting of students who are only absent a few times a year (Keppens and Spruyt, 2017b).

The Current Study

The preceding arguments suggest that self-reported data and administrative data on school absenteeism are each associated

with some advantages and disadvantages due to their specificity. The added value of self-reported data on school absenteeism is that it enables stakeholders to assess absenteeism in more detail. Certain types of absences that remain invisible in administrative data on absenteeism are more likely to be grasped with the self-report technique. In this way, self-reported data on school absenteeism provide an indication of the extent to which administrative data on absenteeism cover all students with (emerging) SAPs. Against this background, this paper is the first study that compares self-reported data on school absenteeism with administrative data of unauthorized absences among (the same group of) students from the fourth year of secondary education in Flanders. More specifically, we investigate: (1) the extent to which self-reported data on school absenteeism and administrative data of unauthorized absences gauge the same behavior, and (2) the extent to which possible discrepancies are related to the type of school absenteeism (e.g., truancy, school refusal, school withdrawal, pre-planned truancy and authorized school absenteeism) and students' characteristics (in particular, ethnicity and SES).

MATERIALS AND METHODS

Study Design

To answer our research questions, we merged self-reported data on school absenteeism from the longitudinal LiSO (Educational Trajectories in Secondary Education) project with data from the administrative database on absences from the Flemish Ministry of Education and Training (named DISCIMUS in the remainder of this paper).

The LiSO project follows a cohort of 6457 students in 57 schools who started secondary education in the school year 2013–2014 (Stevens et al., 2015). A regional sampling strategy was used whereby nearly all students in the targeted cohort who attended school in the target geographic region were included in the study (Dockx et al., 2019). For the present study, data were used from wave 4 (T4) which was gathered at the end of the fourth year (May 2017) of secondary education (age 15–16). T4 is the only wave that included items gauging self-reported school absenteeism. The total sample of students in T4 consisted of 6545 students in 53 schools. Within this sample, 4344 students completed the questionnaire in a valid way resulting in a total response rate of 66.69%.

Registration data on absences among all students in primary and secondary education are collected by the Flemish Agency for Educational services (AGODI). In Flanders, school attendance is registered twice a day. There are many reasons why a student is absent from school. Absences due to illness (and authorized by a doctor or through a parental note)¹, a funeral of a relative

or religious holidays are authorized. When a student has no justified reason for his/her absence (i.e., has an unauthorized absence from school), s/he receives, per half school day, a so-called “B-code”. Schools automatically exchange these registered absences (all absences including unauthorized absences) within a centralized database (DISCIMUS). This enables the Flemish Ministry of Education and Training to link the collected data to other student characteristics. At any time, schools can request the absences they have registered. As a result, the registration data on school absenteeism in Flanders is not only used to intervene at the level of the students², but also to gain insight into the distribution of all absences across different classes and school years. In general, Flanders can be considered as one of the forerunners in Europe when it comes to the accurate and systematic collection of data on school absenteeism among students who follow compulsory education (European Commission, 2013).

In DISCIMUS, each student has a unique identification number. In this paper, we used this unique identification number to merge data from the DISCIMUS database with data from the LiSO database. Only registrations of unauthorized absences that occurred before filling in the LiSO questionnaire were considered.

Because this study involved students in Flemish secondary education and was an initiative of the Flemish government, approval was required of the Belgian *Commissie voor de bescherming van de persoonlijke levenssfeer* (Commission for the protection of the personal privacy). The Commission approved the data collection of the LiSO-project. Parents and students have been informed yearly, with a personal letter and the *schoolreglement* (school charter). A *schoolreglement* in Flanders is a document that contains the specific regulations of the school and its pedagogical project. It needs to be signed by the parents and the student to declare that they agree with the regulations and pedagogical project of the school. By signing this document, they also agree to participate with the LiSO-project and other studies that the school had chosen to participate in.

However, even after signing to agree with the school charter, parents and students can still choose to opt out of a study. This procedure was also approved by the *Commissie voor de bescherming van de persoonlijke levenssfeer*. The linking of the data of the LiSO-project and DISCIMUS poses no specific issues, for the *Commissie voor de bescherming van de persoonlijke levenssfeer* approved that the data can be linked to other datasets. Furthermore, parents and students were informed in the personal letter and the school charter that such linking of data would occur.

Questionnaire Data

Self-reported unauthorized school absenteeism was measured through the following question: “How many times did you skip school without a valid reason in the current school year?” Students who reported to have skipped school at least once were asked about whether their parents knew about the absence and

¹For an absence up to three consecutive calendar days, a note from the parents is sufficient. A medical certificate from the doctor is required in the following cases: (1) if the student is ill for four or more consecutive calendar days (e.g., Friday, Saturday, Sunday and Monday = medical certificate; (2) for every absence due to illness, no matter how short, if the student was already absent four times in the same school year legitimized through a parental note; and (3) if the student is ill during exam periods.

²In Flanders, schools screen the nature of each half school day of unauthorized absence from school. When this absence is regarded as high-risk or when students receive at least 5 B-codes, school counselors start up a more individualized approach.

if so whether they approved the absence. These characteristics allowed us to differentiate between three types of SAP: truancy, school refusal and school withdrawal (Heyne et al., 2019). In this study, and following Heyne et al. (2019), unauthorized absences that are concealed from the parents were labeled as *truancy*. Unauthorized absences that occurred with knowledge of parents, but without consent were labeled as *school refusal*. Unauthorized absences that occurred with approval of the parents were labeled as *school withdrawal*. In addition, information was gathered on pre-planned truancy and self-reported authorized absenteeism. Pre-planned truancy was measured by asking students who reported to have skipped at least once whether their unauthorized absences were discovered by the school staff. Self-reported authorized absenteeism was measured by asking: “How often were you absent from school for a valid reason this school year due to family or personal reasons (e.g., death of a friend or family member) or illness (I had a valid note from my parents or the doctor)”. Respondents answered on a Likert-scale ranging from 1 (never) to 5 (more than 10 times).

Administrative Data

Registered unauthorized absences are measured through the number of “B-codes” in the DISCIMUS dataset. A student receives a B-code for each half school day of unauthorized absence. In other words, a student who had an unauthorized absence for a whole school day receives 2 B-codes. The school year 2016–2017 in fulltime secondary education counted 316 half school days, which equals the maximum number of B-codes a student can receive for that school year. The rate of B-codes among the students in our sample ranged from 0 to 101 ($M = 2.41$, $SD = 6.75$). To compare the registered and self-reported unauthorized absences, the following procedure was used. First, every day on which a student was absent for the whole school day (i.e., for which s/he received 2 B-codes) was recoded to 1. Since the self-reported measure of unauthorized absenteeism asks respondents to report *how many times* they skipped school, students who were absent for a whole school day will likely report this as one time. Next, we recoded the number of B-codes to match the categories used in the self-report measure: none, once, 2 times, 3 times, 4 times, 5 times, 6 times, 7 times, 8 times, 9 times, 10 to 15 times, 15 to 20 times, or more than 20 times. In addition, information on the characteristics of the students were obtained, including gender, ethnicity (speaks foreign language at home), age, educational track (general/arts or technical/vocational) and SES. The latter is measured through the educational level of the mother and whether the student receives an education allowance.

Statistical Analyses

In this study we conducted Poisson multilevel regression analyses (with STATA 14) with the prevalence of registered unauthorized school absences as dependent variable to assess the relationship between self-reported and registered unauthorized school absenteeism. A Poisson model is the most suitable technique since our measures of unauthorized school absenteeism are count variables that are bounded by zero (one cannot be absent from school less than 0 times) and not normally distributed (Cameron and Trivedi, 2013). The multilevel structure enabled us to control

for differences between schools (e.g., whether schools are more or less strict in their registration and detection of unauthorized absences). The first model included the sociodemographic variables gender, ethnicity, age, educational level and SES that are known to relate to school absenteeism (Kearney, 2008; Reid, 2014). In the second model we added the prevalence of self-reported unauthorized school absenteeism. This allowed us to assess whether the administrative data under or overestimated the degree of unauthorized school absenteeism of particular social groups, compared to the self-report data. The latter would be the case when some of the sociodemographic variables remained significant *after* taking into account the self-reported absences. Model 2a examines these associations for our total sample ($N = 4344$). Model 2b examines these associations only for those students who reported to have an unauthorized absence from school at least once ($N = 777$). This subsample included students who had valid answers on the self-reported question on unauthorized school absenteeism and all subsequent measures concerning the type of SAPs. In the third model, we analyzed whether the administrative data under or overestimated (when compared to the self-report data) the degree of unauthorized school absenteeism of certain types of school absenteeism by adding the typology of SAPs, pre-planned truancy and authorized school absenteeism.

Non-response

For the non-response analysis, students who did not (adequately) complete the questionnaire were compared with students who did. Students who did not complete the questionnaire could not because they were absent when their classmates filled in the questionnaires. Some schools were also less motivated to give students sufficient time to properly fill out the questionnaire. Students who failed to complete the questionnaire had statistically more unauthorized absences from school than students who completed a questionnaire, respectively, 13.51 to 2.62 [$F(1) = 737.58$, $p < 0.001$].

RESULTS

Tables 1, 2 present the characteristics of the study population based upon, respectively, the questionnaire data and the administrative data: 50.4% of the participants were boys, 10.5% spoke a foreign language at home, 18.1% had a less educated mother (not finished secondary education), 23.4% received a school allowance and 50.5% was enrolled in technical or vocational education. The prevalence of registered unauthorized school absenteeism was higher (39.1%) than the prevalence of self-reported school absenteeism (19.2%). Among the group of students who reported to have at least once been unauthorized absent from school, 49.4% could be categorized as truancy, 17.4% as school refusal and 33.2% as school withdrawal. Additionally, 57.8% of the students reported that their unauthorized school absenteeism was never discovered.

Table 3 shows the correlation between self-reported and registered unauthorized school absenteeism and helps to answer

TABLE 1 | Sample characteristics based upon questionnaire data.

	Percent	N
Self-reported unauthorized school absenteeism		4344
Never	80.8	
1 time	9.0	
2 times	2.9	
3 times	2.3	
4 times	1.6	
5 times	0.8	
6 times	0.7	
7 times	0.2	
8 times	0.3	
9 times	0.2	
10 to 15 times	0.6	
15 to 20 times	0.3	
>20 times	0.3	
Type of school attendance problem (SAP)		777
Truancy	49.4	
School refusal	17.4	
School withdrawal	33.2	
Has it ever been discovered that you skipped school?		777
Never	57.8	
Once	28.8	
Several times	8.5	
Often	2.2	
Always	2.7	
Self-reported authorized school absenteeism due to family or personal reasons (e.g., death of a family member or a friend)		4344
Never	3.4	
Once	21.0	
2 to 5 times	42.9	
5 to 10 times	19.3	
> 10 times	13.4	

our first research question. We observed a weak but significant positive correlation ($r_s = 0.23$, $p < 0.001$). The strength of this correlation increased when it was re-estimated among the subsample of students who reported to have an unauthorized absence from school at least once ($r_s = 0.40$, $p < 0.001$). The same observation applies for the group of students who reported to have at least one unauthorized absence from school *and* who have been registered with at least 1 B-code ($r_s = 0.44$, $p < 0.001$). This indicates that the rather weak association between self-reported and registered unauthorized school absenteeism is mainly due to students who have been registered with at least one B-code but do not report to have skipped school. When we omitted this group of students, we found a medium-strong association between self-reported and registered unauthorized school absenteeism.

Multivariate analyses enabled us to answer our second research question: whether the observed discrepancies between registration and self-reported data are related to the type of school absenteeism or the student's characteristics (**Table 4**). Model 1 confirms earlier research showing that unauthorized

TABLE 2 | Sample characteristics based upon administrative data.

	Percent	N
Registered unauthorized school absenteeism		4344
Never	61.9	
1 time	14.8	
2 times	7.6	
3 times	3.9	
4 times	2.4	
5 times	1.9	
6 times	1.3	
7 times	1.3	
8 times	0.8	
9 times	0.6	
10 to 15 times	1.7	
15 to 20 times	0.9	
>20 times	0.9	
Gender, boy	50.4	4344
Age		4344
14	0.5	
15	41.5	
16	45.7	
17	10.4	
≥18	1.9	
Ethnicity, foreign language at home	10.5	4344
Educational level of mother, did not obtain diploma secondary education	18.1	4344
School allowance, receives school allowance	23.4	4344
Educational track, technical+vocational	50.5	4344

TABLE 3 | Spearman correlation coefficients between self-reported and registered unauthorized school absenteeism.

All students	0.23***
Students who reported to have been at least once unauthorized absent from school	0.40***
Students with at least 1 B-code	0.23***
Students who reported to have been at least once unauthorized absent from school and with at least 1 B-code	0.44***

*** $p \leq 0.001$.

school absenteeism is more prevalent among boys, students in technical and vocational tracks and students who speak a foreign language at home and with a low SES (Kearney, 2008; Reid, 2014). Model 2 shows significant associations between all of our inserted student characteristics and registered unauthorized school absenteeism after controlling for self-reported unauthorized school absenteeism. In other words, boys, students in the technical and vocational tracks and students who speak a foreign language at home, with a low-educated mother and who received a school allowance received more B-codes than they reported themselves. The same applied for older students. For model 2b, only students who reported to have an unauthorized absence from school at least once were selected ($N = 777$). We observed no large discrepancies between model 2a and 2b, except for

TABLE 4 | Results of Poisson multilevel analyses on the association between registered unauthorized school absenteeism, self-reported unauthorized school absenteeism, student's characteristics and the type of school absenteeism.

	Model 1		Model 2a		Model 2b		Model 3	
	B	SE	B	SE	B	SE	B	SE
Intercept	−5.00***	(0.27)	−4.39***	(0.27)	−4.38***	(0.51)	−4.14***	(0.53)
Gender (0: girl)	0.14***	(0.03)	0.08*	(0.03)	−0.17**	(0.05)	−0.17**	(0.06)
Ethnicity (0: speaks no foreign language at home)	0.28***	(0.04)	0.35***	(0.03)	0.11(*)	(0.07)	0.15*	(0.07)
Educational level of the mother (0: no secondary education)	0.21***	(0.03)	0.14***	(0.03)	0.27***	(0.06)	0.09	(0.06)
School allowance (0: receives no school allowance)	0.28***	(0.03)	0.30***	(0.03)	0.13(*)	(0.05)	0.26***	(0.05)
Educational track (0: general/art)	0.73***	(0.05)	0.65***	(0.05)	0.61***	(0.09)	0.54***	(0.09)
Age	0.27***	(0.02)	0.23***	(0.02)	0.26***	(0.03)	0.25***	(0.03)
Self-reported unauthorized school absenteeism			0.16***	(0.01)	0.15***	(0.01)	0.12***	(0.01)
SAP type (0: truancy)								
School refusal							0.22***	(0.07)
School withdrawal							0.01	(0.06)
Discovered unauthorized school absences							−0.06**	(0.02)
Authorized school absenteeism							0.05***	(0.01)
N students	4344		4344		777		777	
N schools	54		54		54		54	
Model deviance	15031.94***		14025.63***		3337.98***		3285.37***	

The estimated Poisson regression coefficients (B) are presented with standard errors (SE) and Model Deviance, with significance level of the Chi-squared test comparing it to the deviance of the previous model (except model 2b); Model 1 is compared to the null-model. (*) $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$.

gender³. Model 3 indicates that, in particular, students with school refusal received more B-codes compared to their self-reported rate of unauthorized school absenteeism. The same applied for authorized school absenteeism. Students who (often) had authorized absences from school received more B-codes compared to their self-reported unauthorized school absenteeism. Finally, we found that students who pre-planned their school absenteeism and reported that their absenteeism had never been discovered received less B-codes when compared to the rate of unauthorized school absenteeism that they reported themselves.

DISCUSSION

Early identification and intervention of SAPs is crucial to restoring regular school attendance and limiting the long-term impact of these SAPs on students' educational trajectories. In the literature, much attention has been devoted to so-called Response to Intervention frameworks (RtI), sometimes also referred to as Multi-tiered Systems of Support frameworks (MTTS) (Kearney and Graczyk, 2014; Kearney, 2016; Chu et al., 2019; Heyne, 2019; Ingul et al., 2019). RtI refers to a systematic

and hierarchical decision-making process to assign evidence-based strategies based on students' needs and in accordance with regular progress monitoring. A RtI framework applied to school attendance promotes regular attendance for all students at TIER 1, targeted interventions for at-risk students at TIER 2, and intense and individualized interventions for students with regular absenteeism at TIER 3 (Kearney and Graczyk, 2014; Kearney, 2016). In order to work successfully, the RtI framework relies strongly on a valid and reliable identification and detection system. Only when a new absentee problem is identified, early intervention can be initiated in order to prevent absenteeism becoming more severe and chronic. In the present study, we built on this perspective by assessing the systematic (mis)match between absenteeism as registered by schools compared to self-reports. Based on unique survey data among 4344 students (aged 15–16) that could be linked to administrative data we found a weak correlation between measures of unexcused school absenteeism. Moreover, the mismatch between registration and self-report data was systematic with boys, students in technical and vocational tracks and students who speak a foreign language at home, with a less-educated mother and who receive a school allowance having consistently higher rates of registered unauthorized absenteeism compared to what they reported themselves. In addition, pupils with school refusal and who were often authorized absent from school received more registered unauthorized absences compared to their self-reported unauthorized school absenteeism. What implications do these two key findings have?

First, regarding the weak association between self-reported unauthorized school absenteeism and registered unauthorized school absenteeism, the rate of registered unauthorized school absenteeism was approximately twice as large compared to the

³ Among the subsample of students who reported to have an unauthorized absence from school at least once, in particular, girls seem to have more B-codes compared to what they reported themselves. Subsequent analyses showed an interaction-effect between gender and self-reported unauthorized school absenteeism (results available on request). When the rate of self-reported unauthorized school absenteeism increases, the relationship between self-reported and registered unauthorized school absenteeism is stronger for girls than for boys. A possible explanation is that among students with more severe SAPs, boys are less likely to admit their "deviant" behavior.

rate of self-reported school absenteeism. Several mechanisms may help to explain this discrepancy. Some students pre-plan their truancy and do everything to avoid being caught (Keppens and Spruyt, 2017a). Other students might be more suspicious when they report their unauthorized absences and consequently provide fewer valid responses in a questionnaire. In other cases, the observed discrepancy may be due to biased school staff when deciding whether or not an absence is authorized or due to parents who legitimize the (unauthorized) absences of their children. At the same time, our findings also suggest that in order to optimize the validity and reliability of school attendance identification systems, schools need to actively analyze their attendance data. Indeed, this paper shows that to maximize the potential of attendance data and to ensure that students do not fall between the cracks of the registration system, the mere collecting and monitoring of attendance data is insufficient. Schools also need to analyze their collected data. Only by analyzing the data, trends between types of students and types of attendances can be identified. It is therefore surprising to find that the question “*how to use attendance data at a school level, within a multitier framework*” remains a largely unanswered question in the extant literature. Given the large number of youth with absences [11% of adolescents in the United States between the ages of 12–17 reported skipping school in the past 30 days and 17.82% of the 15-year-old students in the EU reported skipped school in the past 2 weeks (Maynard et al., 2017; Keppens and Spruyt, 2018)], the use of technology to enhance early identification is indispensable. Failing to answer the question how attendance data can be used at schools within a multitier framework may lead to an accountability culture in which the registration of absenteeism becomes an end in itself rather than a starting point to critically reflect on and gain more insight in to the meaning of (emerging) SAPs. This may lead to a situation in which schools are urged to implement registration systems, but lack the sufficient resources and support to guide students with SAPs in a customized way.

Second, in the context of discussions concerning interventions to reduce school absenteeism many authors lament about the lack of a unified approach to differentiate between youth with SAPs (Heyne et al., 2019; Tonge and Silverman, 2019). According to Heyne et al. (2019), differentiation is beneficial because SAPs are heterogeneous, varying in etiology and presentation, while having associations with a broad array of risk factors. The authors argue that risk and protective factors associated with the development, maintenance, and prevention of SAPs are likely to be different for different types of SAPs. The most effective interventions might indeed be those that target the factors relevant to a particular type of SAP (see also Heyne, 2019). In order to integrate these perspectives within the RtI framework, we must examine whether certain specific interventions are more effective according to the type of SAP (Tonge and Silverman, 2019). Following the same reasoning, we must also ensure that all types of SAPs are identified in a timely manner through attendance tracking. Concerning the latter, our results suggest that there is a particular discrepancy between self-reported unauthorized school absenteeism and registered unauthorized school absenteeism among students with school refusal. Students

with school refusal received more B-codes compared to the rate of unauthorized school absenteeism that they reported themselves. A plausible explanation for this observation is that these students do not perceive their absences as unauthorized and consequently do not report them as such in self-reported questionnaires. In this paper, we measured unauthorized absenteeism by means of an item asking youth whether they have skipped school without a valid reason. As Heyne et al. (2019, p. 7) already pointed out, the notion of skipping school without a valid reason is open to broad interpretation. Students with school refusal could have interpreted their general fear of school as a valid reason to skip school. Interestingly, we did not observe a different association between self-reported absenteeism and registered school absenteeism among students with truancy and students with school withdrawal. For both types of school absenteeism, we expected to find higher rates of self-reported absenteeism compared to the rate of registered school absenteeism. Among students who truant, the association between self-reported and registered school absenteeism is likely interrupted due to pre-planned and premeditated truancy. For those students who withdraw from school, it is probable that the association between self-reported and registered school absenteeism is interrupted by parents legitimizing their children's absences.

Finally, we acknowledge the limitations of this study. First, as mentioned earlier, this study examines the relationship between self-reported and registered unauthorized school absenteeism while knowing in advance that both are not completely the same. A student who is ill but does not have a doctor's note will not report that absence as unauthorized, yet it will be registered by the school staff as such. Within the same line of reasoning, some students might perceive reasons for absences as “legitimate” while these are not defined as such by the school. That is why we did not use statistical indicators which measure the degree of agreement (e.g., Kappa's coefficient) which are often used in criminological research to compare police statistics with self-reported delinquency. In this paper, we primarily focused on the association between self-reported and registered absences and, in particular, on whether some subgroups of students or types of absence are more prevalent in some types of data. The advantage of that strategy (by means of Poisson regression analysis) is that modifications and recoding of the rate of registered absences (see section “Administrative Data”) had no effect on our conclusions. After all, we only divided the rate of unregistered absences through a constant factor. Second, relying on whether parents knew and/or approved of the absence to measure the type of absenteeism may not be optimal. Generally, truancy is characterized by a lack of parental knowledge of the absence, school refusal by parental knowledge without consent, and school withdrawal by a lack of parental consent. However, Heyne et al. (2019) note that in some cases, students with school refusal conceal their non-attendance from their parents (see also: Elliott, 1999). In other cases, parents might be more ambivalent toward their child with school refusal due to “overprotectiveness” of parents who are afraid of pressuring their child too much (Heyne et al., 2019, p. 26). Ideally, questions about a student's reluctance or refusal to attend school are needed to more accurately differentiate between truancy, school

refusal and school withdrawal. Unfortunately, these questions were not included in the self-reported questionnaire. However, these limitations do not alter the fact that this paper is among the first to gauge the prevalence of different types of absences on a large representative sample ($N = 4344$). While the latter was not the objective of this paper, this research suggests, in agreement with research from Berg (2002) and Egger et al. (2003), that the rate of school refusal is less common than truancy. In addition, the results also suggest that the rate of school withdrawal is more prevalent, compared to school refusal and slightly less than truancy. Future research on the prevalence of these types of school absenteeism is needed to strengthen the claims in this paper.

CONCLUSION

This study's main finding is the weak association between self-reported unauthorized school absenteeism and registered unauthorized school absenteeism. The rate of registered unauthorized school absenteeism was approximately twice as large compared to the rate of self-reported school absenteeism. Boys, students in the technical and vocational tracks and students who spoke a foreign language at home, with a low-educated mother and who received a school allowance received more B-codes than they reported themselves. The same applied for school refusal and authorized school absenteeism. Students who pre-planned their truancy, on the other hand, received less B-codes than they reported themselves. More understanding of these discrepancies through future research is needed because it suggests that (1) researchers should be cautious with generalizing scientific research about school absenteeism between self-reported and administered data and (2) school staff and other

stakeholders might not reach all students with SAPs when interventions and counseling are exclusively based on the registration of unauthorized absences.

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

AUTHOR CONTRIBUTIONS

GK and BS designed and planned the study. GK and JD structured and analyzed the data. GK wrote the manuscript. All authors interpreted the data, took responsibility for the integrity and accuracy of the data analysis and the decision to submit this manuscript for publication, read, and approved the final manuscript.

FUNDING

This study was supported by the Ministry of Education and Training in Flanders (Belgium).

REFERENCES

- Archambault, I., Janosz, M., Fallu, J., and Pagani, L. (2009). Student engagement and its relationship with early high school dropout. *J. Adolesc.* 32, 651–670. doi: 10.1016/j.adolescence.2008.06.007
- Berg, I. (2002). "School avoidance, school phobia, and truancy," in *Child and Adolescent Psychiatry: A Comprehensive Textbook*, ed. M. Lewis, (Sydney: Lippincott Williams & Wilkins), 1260–1266.
- Cabus, S. J., and De Witte, K. (2015). Does unauthorized school absenteeism accelerate the dropout decision? evidence from a Bayesian duration model. *App. Econ. Lett.* 22, 266–271. doi: 10.1080/13504851.2014.937031
- Cameron, A., and Trivedi, P. (2013). *Regression Analysis of Count Data*. Cambridge: University Press.
- Chu, B., Guarino, D., Mele, C., O'Connell, J., and Coto, P. (2019). Developing an online early detection system for school attendance problems: results from a research-community partnership. *Cogn. Behav. Pract.* 26, 35–45. doi: 10.1016/j.cbpra.2018.09.001
- Dockx, J., De Fraine, B., and Vandecandelaere, M. (2019). Tracks as frames of reference for academic self-concept. *J. Sch. Psychol.* 72, 67–90. doi: 10.1016/j.jsp.2018.12.006
- Egger, H. L., Costello, E., and Angold, A. (2003). School refusal and psychiatric disorders: a community study. *J. Am. Acad. Child Adolesc. Psychiatry* 42, 797–807. doi: 10.1097/01.chi.0000046865.56865.79
- Elliott, J. (1999). Practitioner review: school refusal: issues of conceptualisation, assessment, and treatment. *J. Child Psychol. Psychiatry* 40, 1001–1012. doi: 10.1111/jcpp.12848
- European Commission (2013). *Thematic Working Group on Early School Leaving. Early Warning Systems in Europe: Practice, Methods and Lessons*. Brussels: Education & Culture DG.
- Havik, T., Bru, E., and Ertesvåg, S. (2015). School factors associated with school refusal- and truancy-related reasons for school non-attendance. *Soc. Psychol. Educ.* 18, 221–240. doi: 10.1007/s11218-015-9293-y
- Heyne, D. (2019). Developments in classification, identification, and intervention for school refusal and other attendance problems: introduction to the special series. *Cogn. Behav. Pract.* 26, 1–7. doi: 10.1016/j.cbpra.2018.12.003
- Heyne, D., Gren-Landell, M., Melvin, G., and Gentle-Genitty, C. (2019). Differentiation between school attendance problems: why and how? *Cogn. Behav. Pract.* 26, 8–34. doi: 10.1016/j.cbpra.2018.03.006
- Ingul, J. M., Havik, T., and Heyne, D. (2019). Emerging school refusal: a school-based framework for identifying early signs and risk factors. *Cogn. Behav. Pract.* 26, 46–62. doi: 10.1016/j.cbpra.2018.03.005
- Kearney, C. (2002). Identifying the function of school refusal behavior: a revision of the school refusal assessment scale. *J. Psychopathol. Behav. Assess.* 24, 235–246.
- Kearney, C. (2007). Forms and functions of school refusal behavior in youth: an empirical analysis of absenteeism severity. *J. Child Psychol. Psychiatry* 48, 53–61. doi: 10.1111/j.1469-7610.2006.01634.x
- Kearney, C. (2008). School absenteeism and school refusal behavior in youth: a contemporary review. *Clin. Psychol. Rev.* 28, 451–471. doi: 10.1016/j.cpr.2007.07.012
- Kearney, C. (2016). *Managing School Absenteeism at Multiple Tiers: An Evidence-Based and Practical Guide for Professionals*. New York, NY: Oxford University Press.

- Kearney, C., and Graczyk, P. (2014). A response to intervention model to promote school attendance and decrease school absenteeism. *Child Youth Care Forum* 43, 1–25. doi: 10.1007/s10566-013-9222-1
- Kearney, C., and Silverman, W. (1993). Measuring the function of school refusal behavior: the school refusal assessment scale. *J. Clin. Child Psychol.* 22, 85–96. doi: 10.1207/s15374424jccp2201_9
- Keppens, G., and Spruyt, B. (2016). Towards a typology of occasional truancy: an operationalisation study of occasional truancy in secondary education in Flanders. *Res. Pap. Educ.* 32, 121–135. doi: 10.1080/02671522.2015.1136833
- Keppens, G., and Spruyt, B. (2017a). The development of persistent truant behaviour: an exploratory analysis of adolescents' perspectives. *Educ. Res.* 59, 353–370. doi: 10.1080/00131881.2017.1339286
- Keppens, G., and Spruyt, B. (2017b). The school as a socialization context: understanding the influence of school bonding and an authoritative school climate on class skipping. *Youth Soc.* 51, 1145–1166. doi: 10.1177/0044118X17722305
- Keppens, G., and Spruyt, B. (2018). Truancy in Europe: does the type of educational system matter? *Eur. J. Educ.* 53, 414–426. doi: 10.1111/ejed.12282
- Kirk, D. (2006). Examining the divergence across self-report and official data sources on inferences about the adolescent life-course of crime. *J. Quant. Criminol.* 22, 107–129. doi: 10.1007/s10940-006-9004-0
- Mandinach, E. (2012). A perfect time for data use: using data-driven decision making to inform practice. *Educ. Psychol.* 47, 71–85. doi: 10.1080/00461520.2012.667064
- Maynard, B., Salas-Wright, C., Vaughn, M., and Peters, K. (2012). Who are truant youth? examining distinctive profiles of truant youth using latent profile analysis. *J. Youth Adolesc.* 41, 1671–1684. doi: 10.1007/s10964-012-9788-1
- Maynard, B., Vaughn, M., Nelson, E., Salas-Wright, C., Heyne, D., and Kremer, K. (2017). Truancy in the United States: examining temporal trends and correlates by race, age, and gender. *Child. Youth Serv. Rev.* 81, 188–196. doi: 10.1016/j.childyouth.2017.08.008
- O'Keefe, D. (1993). *Truancy in English Secondary Schools*. London: DFES.
- Reid, K. (1999). *Truancy and Schools*. New York, NY: Routledge.
- Reid, K. (2014). *Managing School Attendance. Successful Intervention Strategies for Reducing Truancy*. New York, NY: Routledge.
- Rumberger, R. (2011). *Dropping Out: Why Students Drop Out of High School and What Can Be Done About It*. Cambridge: Harvard University Press.
- Skiba, R., Horner, R., Chung, C., Rausch, M., May, S., and Tobin, T. (2011). Race is not neutral: a national investigation of African American and Latino disproportionality in school discipline. *Sch. Psychol. Rev.* 40, 85–107.
- Stevens, E., Dockx, J., Custers, C., Fidlers, I., De Fraine, B., and Van Damme, J. (2015). *Liso-Project: Steekproef September 2013*. Leuven: Steunpunt Studie- en Schoolloopbanen.
- Stone, A., Turkkan, J., Bachrach, C., Jobe, J., Kurtzman, H., and Cain, V. (2000). *The Science of Self-Report: Implications for Research and Practice*. New York, NY: Lawrence Erlbaum Associates.
- Tonge, B., and Silverman, W. (2019). Reflections on the field of school attendance problems: for the times they are a-changing? *Cogn. Behav. Pract.* 26, 119–126. doi: 10.1016/j.cbpra.2018.12.004
- van Batenburg-Eddes, T., Butte, D., van de Looij-Jansen, P., Schiethart, W., Raat, H., de Waart, F., et al. (2012). Measuring juvenile delinquency: how do self-reports compare with official police statistics? *Eur. J. Criminol.* 9, 23–37. doi: 10.1177/1477370811421644
- Zhang, D., Katsiyannis, A., Barrett, D., and Willson, V. (2007). Truancy offenders in the juvenile justice system: examinations of first and second referrals. *Remedial Spec. Educ.* 28, 244–256. doi: 10.1177/07419325070280040401
- Zhang, M. (2003). Links between school absenteeism and child poverty. *Pastoral Care Educ.* 21, 10–17. doi: 10.1111/1468-0122.00249

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2019 Keppens, Spruyt and Dockx. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



Policy With an Asterisk: Understanding How Staff in Alternative School Settings Negotiate a Mandatory Attendance Policy to Meet the Needs of Their Students

Anton Birioukov-Brant^{1*} and Kiera Brant-Birioukov²

¹ Faculty of Education, University of Ottawa, Ottawa, ON, Canada, ² Faculty of Education, University of British Columbia, Vancouver, BC, Canada

OPEN ACCESS

Edited by:

David Heyne,
Leiden University, Netherlands

Reviewed by:

Ken Charles Reid,
Swansea University, United Kingdom
Malin Gren Landell,
Independent Researcher, Linköping,
Sweden

*Correspondence:

Anton Birioukov-Brant
abiri066@uottawa.ca

Specialty section:

This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Education

Received: 01 August 2019

Accepted: 22 November 2019

Published: 06 December 2019

Citation:

Birioukov-Brant A and
Brant-Birioukov K (2019) Policy With
an Asterisk: Understanding How Staff
in Alternative School Settings
Negotiate a Mandatory Attendance
Policy to Meet the Needs of Their
Students. *Front. Educ.* 4:144.
doi: 10.3389/feduc.2019.00144

Compulsory school attendance is enacted legislation in every Canadian province. Provincial Ministry of Education attendance expectations trickle down to the school boards, which create mandatory attendance policies stipulating that students be present at school irrespective of their ability to attend. A body of literature has documented the numerous and often insurmountable obstacles many youths face with respect to consistently attending school. Issues that impede consistent attendance include abuse, poverty, violence, and mental health disorders. However, attendance policies do not pay credence to these issues. Rather, school educators are expected to follow the policies in their rigid conception. This creates tension for the educators, who are expected to uphold unilaterally imposed policies, and yet enact these policies in such a way that does not compromise their students' education. Educators working in alternative schools are often confronted with this moral dilemma because these schools serve high numbers of students often absent from school. As such, we sought to understand the professional and ethical tensions alternative high school staff experience when navigating the enforcement of mandatory attendance policies. This study was carried out in a large city in the Canadian province of Ontario, where the school board's attendance policy requires students over the age of 18 to be demitted from enrollment if they miss 12 consecutive days of school without a "legitimate" excuse. Semi-structured interviews with 16 staff members in four alternative high schools revealed the inherent difficulty of responding to the needs of students by allowing them to miss some school while also meeting the legal obligations of the mandatory attendance policy established by the school board. We argue that these alternative school educators are active *policy makers* in their own right, as they interpret, co-opt, appropriate, and negotiate the attendance policy with the realities of their students' lives.

Keywords: absenteeism, educational policy, policy appropriation, policy implementation, alternative schools, last chance education, Canada

INTRODUCTION

Since the inception of public schooling in Canada, educational professionals have been preoccupied with keeping children in school. From the mid-nineteenth to the mid-twentieth centuries, Canadian provinces passed compulsory attendance laws requiring all school-aged children to be present in school (Oreopoulos, 2005). This legislation is founded on a deterrent model, where being absent from school is considered to be an illegal act, punishable by fines and even jail sentences. However, despite such legislation, students miss school for various reasons. The causes for absenteeism are as complex and diverse as the students themselves—ranging from casual disengagement to extreme poverty that prohibits school access. As absenteeism is the main precursor to early school leaving, there is concern from educators about the need to eradicate habitual absenteeism, and if this is unattainable, to accommodate it. However, such efforts to accommodate (allowing students to miss some class without penalty), are in direct contradiction of the established compulsory attendance policies. The current study seeks to understand how educators navigate these tensions between meeting student need and upholding official policy.

Following, we explore the issue of absenteeism and frame it as occurring for voluntary and involuntary reasons (Birioukov, 2016). We then describe the compulsory attendance policies in Canada and in the sampled school board, where we then discuss the ways in which alternative school educators navigate these policies. Thereafter, drawing on the literature on alternative schools, we elucidate the unique approach to managing absenteeism that motivated the current study.

Absenteeism

Although many associate absenteeism with “skipping” school—where youths are willingly absent to engage in other activities—this common (mis)conception of absenteeism belies the convoluted and contextual nature of the problem. Students miss school for a plethora of reasons, many of which lie beyond the walls of the school. For example, a number of students experience health problems (e.g., depression; sleeping issues; anxiety) that compromise their ability and motivation to be present in school (DeSocio et al., 2007). A student’s home life can also have deleterious effects on attendance, as families may purposefully keep children from school in order to help around the house and/or earn an income (Kearney, 2008). Moreover, many youths live in tumultuous households, and do not have the stability in their lives to be present at school consistently (Wilson et al., 2008). A substantial portion of absentees come from an economically disadvantaged position (Reid, 2013; Maynard et al., 2017), and living in or near poverty can limit a student’s ability to attend in a number of ways, such as: lack of transportation; little money for food, clothes, and/or school supplies; frequent housing disruptions; living in dangerous and crime prone areas; involvement in the criminal justice system; having to earn an income; and, the perceived irrelevance of education (Hinz et al., 2003; Nichols, 2003; Brandibas et al., 2004; Branham, 2004; Darmody et al., 2008; Leonard, 2011; Marvul, 2012). Schools too cause absenteeism. A negative school climate has been widely

documented as one of the main causes of absenteeism, and is linked to “harsh and inflexible disciplinary practices, rigid regulations regarding school reintegration, school curricula not well-tailored to a child’s individual needs or interests, poor teaching and student–teacher relationships, inattention to diversity issues, and inadequate attendance management practices” (Kearney, 2008, p. 459). When a youth is faced with a hostile and negative school environment they may choose to simply avoid the school setting.

The causes for absenteeism should not be considered in isolation, as multiple causes interact to discourage and/or prohibit regular attendance. To conceptualize the “absentee” as the passive truant who simply refuses to come to school out of disinterest and defiance is problematic, as this conception undermines the individual, home life, school, and societal contexts that our students grapple with daily, as they attempt to be physically and mentally present in our schools. The convergence of multiple factors often make it difficult for students to attend, and their failure to do so has numerous repercussions and consequences for the absent student.

Absenteeism has been associated with: alienation in school (Reid, 2014); strained student-teacher relationships (DeSocio et al., 2007); and lowered academic performance (Mac Iver, 2011; Attwood and Croll, 2015), amongst other consequences. A cycle of disengagement can quickly arise, where the student becomes isolated from peers and staff, thereby further straining their connection to the school (Ekstrand, 2015). For some this process will lead to premature school leaving, as absenteeism has been found to be the dominant precursor to leaving school prior to graduation (Maynard et al., 2012). The life opportunities for those without a high school diploma are severely limited (Uppal, 2017), and this has, in part, motivated a plethora of absenteeism reduction strategies.

The solutions to absenteeism are based on where the cause of the absence is thought to originate (e.g., student, family, school, society). Student-centered solutions focus on psychological counseling designed to alleviate mental health issues (Maynard et al., 2015), while more punitive-oriented approaches involve handing out detentions, suspensions, expulsions and even criminal charges for non-attendance (Maynard et al., 2013). Meanwhile, solutions aimed at the family concentrate on augmenting child-rearing practices that encourage regular attendance (Fantuzzo et al., 2005). If these attempts fail, the families may be subject to criminal prosecutions under truancy laws (Monahan et al., 2014). School-based solutions receive much scholarly attention, and the majority concern improving school climate through: reducing bullying (Havik et al., 2015); developing closer bonds between teachers and students (Marvul, 2012); and, the provision of academic and remedial assistance (Kearney and Graczyk, 2014). Societal solutions are few, as changing the current socioeconomic conditions are arguably beyond the abilities of schools. However, increasing the availability of social services (Gase et al., 2015), and the provision of free clothing, food, school supplies, and transportation (DeSocio et al., 2007), are some of the suggested strategies aimed at reducing the societal barriers to attendance.

There are many recommended strategies to reduce absenteeism; however, for a subset of youths whose absenteeism is deeply ingrained, these solutions may not be enough. As a “last resort,” students voluntarily enroll or are placed into alternative schools. These schools have been designed to meet the needs of this at-risk population. Through individualized programming and student-centered wraparound services, alternative schools have much potential to reengage absentees. In particular, alternative schools’ flexible approach to attendance provides room for *accommodating* absenteeism, as well as trying to reduce it. Accommodation differs from increasing attendance by acknowledging that continued attendance is very difficult for some students. The life circumstances of chronically absent youths may be so difficult that the students are involuntarily absent through no fault of their own (Birioukov, 2016). Differentiating between voluntary (motivationally-based) and involuntary (structurally-based) absences allows for recognition that some youths may wish to attend, but struggle doing so due to issues in their lives. Thus, an admission needs to be made that some students’ difficulties are so severe that regular attendance is unachievable. As long as children are abused, neglected, and forced to live in poverty, they will have difficulty being perfect attenders. Youths with challenging personal lives should not be dismissed to the margins of the educational system. Strategies that allow these youths to miss some school without penalty are necessary in an equitable schooling structure. However, current mandatory attendance policies do not differentiate voluntary and involuntary absenteeism.

Mandatory Attendance Policies

Compulsory attendance legislation accompanied the expansion of governmentally funded schooling in Canada; and mandatory attendance was made a legal requirement in all provinces between 1871 and 1943 (Oreopoulos, 2005). Without a national department of education, Canadian provinces are left to design their own attendance policies. However, ensuring that attendance policies are followed has been an ongoing challenge for school districts, and one method to guarantee compliance is truancy laws. The (Office of the Child and Youth Advocate in Newfoundland and Labrador, 2019) has found that all “provinces and territories have education laws requiring children to attend school,” and that “parents who violate this law can be subject to fines and/or prison sentences” (p. 14). The province of Ontario too has a mandatory attendance policy that expects all students to be in school consistently *regardless of ability*. The *Ontario Education Act* section 21.1(a) stipulates:

Every person who attains the age of 6 years on or before the first school day in September in any year shall attend an elementary or secondary school on every school day from the first school day in September in that year until the person attains the age of 18 years.

Failure to meet these expectations can result in fines, driver’s license suspension, probation, and jail sentences for both the absentee and their family. The expectation that students attend school consistently regardless of life circumstances is problematic, as it treats all absences as a voluntary decision

by the student (Birioukov, 2016). This conception of inflexible attendance policies trickles down from the Ministry of Education to the local school boards, including the one sampled for this research.

Following the Ministry of Education directive, the school board in which this study took place has a mandatory attendance policy which requires students to be present at all times. At the onset, the policy does not appear to be punitively orientated; for example, there are proactive actions for reporting absenteeism as soon as a student has missed 5 days of school. However, there is an issue of the increased severity and punitive nature of the responses to prolonged absenteeism. As the absenteeism increases, so do the consequences, and there are threats of referral to the criminal justice system if the absenteeism continues. The last threshold is a 12 day¹ consecutive absence streak, after which referrals to attendance counselors, alternative schools, the criminal justice system, or other educational opportunities outside of traditional schooling, are made. The policy does not differentiate between voluntary/involuntary causes of absenteeism, but rather utilizes the excused/unexcused absence classification. Excused absences refer to sickness and travel, whereas unexcused absences encompass all others. A body of literature has highlighted the ineffectiveness of this classification, as there is much difficulty in discerning a truly excused absence, as well as the discrepancies in how schools classify absences (Birioukov, 2016; Heyne et al., 2019). Thus, a student from a privileged background may be “excused” to miss school to go on holiday, whereas a youth in challenging circumstances will be categorized as having an “unexcused” absence if they miss school to stand in line at the soup kitchen. These definitional conundrums have a direct effect on how the absenteeism is managed and punished in schools, as evidenced by mandatory attendance policies which legitimize “excused” absences and punish the “unexcused.”

The policy also does not provide explicit instructions on how to manage absenteeism for students who are over the age of 18. In Ontario, students are legally required to attend school until the age of 18, but have the right to stay enrolled in public schools until the age of 21. Thus, there is a 3-year “gray zone,” where the students have the right to an education, but schools are not legally bound to keep them on roll. It is this facet of the policy that is the most problematic, as it provides an easy avenue for schools to remove challenging students (e.g., absentees) from the roll. The official policy, however, is not always directly implemented in the schools as designed, and educators have a considerable role to play in its adoption and adaptation within their school.

Navigating Authorized Policy

Policy, both in the literature and colloquial public discourse, is typically viewed as a written set of guidelines or rules (Levinson et al., 2009). Authorized bodies construct authoritative policies that are unilaterally handed down to the policy implementers. In this view, policy makers are ministries of education and

¹The actual number of consecutive days absent has been changed in both our writing and in the direct quotes of the participants. This is done in order to protect the anonymity of the school board, the schools, and the participants.

school boards, wherein policy implementers are superintendents, school administrators and teachers (Winton and Pollock, 2013). For Levinson et al. (2009), this *authorized policy* that has been constructed by recognized policy makers then determines the “accepted” norms and modus operandi of the schools. In turn, authorized policy regulates expectations, orders behavior, and allocates resources. Superintendents, administrators and teachers are “not robots,” who objectively “carry out orders issued from above” (Fowler, 2013, p. 8). Hence, understanding educational policy requires attending to the negotiation and co-optation that transpires when educators enact policy in schools. This is to say: to understand policy is to understand the socially implicated contexts in which policy is implemented.

Educational policy is “contested terrain,” for it cannot be easily defined (Ozga, 2000, p. 1). The making of policy typically transpires near the top of the political rung, and the re-making of policy transpires when it is put into action in the schools (Ozga, 2000; Fowler, 2013). Although educators have the professional agency to engage with and enact policy in organic ways, the power of the authorized policy cannot be undermined. Educational policy in this sense is therefore “best conceived as a practice of wielding power” by those who might never be on the ground-floor of policy implementation (Levinson et al., 2009, p. 771). Authorized policy is intentionally vague to be reflective of the general population, but such standardized uniformity often fails to meet the needs of the increasingly pluralistic youth populations (Bates, 2006). Whereas, policy is intended to be generic enough to accommodate diverse populations, the policy implementers must then liaise between the generalist policies with their specific and local student populations. Hence, authorized policies are likely to be, at one time or another, in contradiction with educators’ values and practices as they navigate the modern Canadian classroom.

(Goddart and Hart, 2007) found that when Canadian administrators in the province of Alberta were diligent practitioners of authorized policy, students of marginalized identities—such as those who were English Language Learners or who lived below the poverty line—were too often left by the wayside in their education because they did not/could not conform to the expectations outlined in the policies. The myth of students arriving at school who are “ready to learn,” assumes that all students have arrived on time, well-fed, and have had a good night’s sleep. This myth undermines the realities of marginalized students whose needs are not always reflected in one-size-fits-all policy (Penny et al., 1993; Goddard and Hart, 2007). Educators who attempt to accommodate the diverse needs of their students, particularly students of marginalized identities, are then left to navigate the policies and advocate for their students’ education on their own terms.

As on-the-ground advocates for their students’ education—or what Lipsky (1980) termed, *street-level bureaucrats*—educators are on the front lines to mediate the prescribed policies with the realities of their schools. For Fowler (2013), educators are key actors in the policy development processes, wherein they are active policy implementers, followers, and makers. As more than just passive receptors of top-down policy, viewing educators as *policymakers* highlights the active role they take as interpreters

who mediate and co-opt policy to fit the needs of their students and school communities (Hamann and Lane, 2004). This mediated and co-opted policy represents a shift from *authorized policy* toward *unauthorized policy*, which recognizes the social practice of policy making and implementation (Levinson et al., 2009). Educators as policymakers act not in isolation, but through complex interactions and negotiations with other actors and social contexts, to co-construct “new policy in situated locations” (Koyama, 2011, p. 22). However, educators cannot act outside of authorized policy. Educators in the Canadian context of the profession are public servants who are accountable to school boards, ministries of education, and provincial legislation. The tension between being accountable yet simultaneously meeting student need is particularly evident in alternative high schools, which tend to serve high numbers of absentees.

Alternative High Schools

Having gained popularity in the 1960s and 1970s in North America, alternative schools are designed to “provide an innovative and unique way to educate students who did not respond to traditional forms of education” (O’Brien and Curry, 2009, p. 4). Alternative schools have spread in number and scope, ranging from truly innovative forms of education, to serving as placements for students deemed to have behavioral issues (Raywid, 2001). The Ontario Ministry of Education (OME) defines alternative schools as being designed to “re-engage students who have had difficulty succeeding in a traditional classroom or school environment, including students who are returning to school after having dropped out” (Ontario Ministry of Education, 2005, p. 2). Alternative schools are renowned for their small size, which allows for the development of positive school climates and tight bonds between teachers and students (Vellos and Vadeboncoeur, 2013). These relationships are vital for students prone to absenteeism, as they are finally able to find “teachers [who] exhibit genuine concern for their well-being that they had never seen before” (D’Angelo and Zemanick, 2009, p. 216). The close bonds permit teachers to know their students well, and with small class sizes teachers can differentiate and tailor their instruction to match the needs and interests of each youth (De La Ossa, 2005). Alternative schools have been documented to raise attendance (Mac Iver, 2011; Marvul, 2012); improve behavior (Simonsen and Sugai, 2013); and, help students graduate (Cox, 1999; De La Ossa, 2005).

Alternative schools are able to reduce the motivational or *voluntary* absenteeism factors (e.g., hostile teachers; bullying) that may be dissuading a student from attending. However, these schools also work to remove the structural barriers (e.g., having to secure food) that cause *involuntary* absences not associated with motivation. Many alternative schools have a number of support staff (e.g., special education; counseling; psychiatric; social workers) who work to address any issues the students may have (Gaskell, 1995; Saunders and Saunders, 2001/2002; Mac Iver, 2011). The support staff progress alternative schools’ position from content delivery to a more holistic wraparound service provider. These attempts are also bolstered by the provision of a number of physical supports in alternative schools such as free food (Gaskell, 1995); clothing (Wishart, 2009); transportation

(Cox, 1999; D'Angelo and Zemanick, 2009) and shower and laundry facilities (The McCreary Centre Society, 2008). Through these services, alternative schools attempt to reduce the barriers prohibiting their students' consistent attendance.

While steady attendance is the goal for all students, alternative schools are cognizant of the impossibility of this expectation for a subset of their students. However, rather than punishing absentees for non-attendance—as is generally the norm in most mainstream schools—alternative schools seek accommodations. Accommodating is done in several ways, such as: flexible scheduling (Morrissette, 2011); removing or modifying attendance expectations and tests/exams (Velloso and Vadeboncoeur, 2015); providing extensions and loose deadlines on assignments (Cox, 1999); and infusing independent learning activities that allow students to progress at their own pace (Wishart, 2009). These strategies are designed to permit students to miss some of their schooling without penalty or the severe repercussions evident in mainstream schools.

A thorny issue arises when alternative schools are expected to adhere to the same policy and accountability measures as mainstream schools. As previously mentioned, mandatory school attendance is a legal requirement for all youths in Canada (Oreopoulos, 2005). Thus, some of the accommodation strategies employed in alternative schools are confronted by the mandatory attendance policies of the Ministry of Education and school boards. This creates numerous legal, professional, and ethical dilemmas for the staff who work in alternative schools—as doing “right” by their students is often at odds with the rigid mandatory attendance policies.

Aims of the Current Study

Our research sought to understand the professional and ethical tensions alternative high school staff members experience when navigating the enforcement of mandatory attendance policies. Sixteen staff members in four alternative high schools in Ontario, Canada were sampled for this qualitative research. Through semi-structured interviews, the school personnel shared the inherent difficulties of allowing their students to miss some school, whilst satisfying the legal obligations of the mandatory attendance policy established by the school board. We argue that these alternative school educators are active *policy makers* in their own right, as they interpret, co-opt, appropriate, and negotiate the mandatory attendance policies with the realities of their students. Our aim is to elucidate the inequitable nature of compulsory attendance policies as well as the ways in which staff working with youths prone to absenteeism respond to these policies.

METHODOLOGY

Much of the absenteeism literature is quantitatively based. Statistical analyses are useful for isolating variables that contribute to absenteeism, as well as monitoring its reduction. However, the realities of absenteeism are convoluted, and much of the complexity is lost in a purely quantitative investigation. This research was purposefully qualitative, and aimed to capture the staff members' thoughts and actions on navigating the

attendance policy. We employed an instrumental case study approach, where the sampled schools themselves were not the point of inquiry, but rather the staffs' negotiation of the policy (Stake, 1995). In other words, it was not the goal of the research to document what each particular site did or did not do, but rather to capture the narratives and perspectives of the staff in how they navigate the inherent ethical, professional, and legal dilemmas when attempting to follow the mandatory attendance policy, whilst accommodating the exceptional circumstances of their students.

Upon receiving ethical clearance from the University of Ottawa and the school board, recruitment and ethical consent was secured from each participant. Four alternative high schools were sampled in a large urban center in the province of Ontario, Canada. The schools are small by mainstream standards (80–225 enrolled students), and are quite diverse in their racial and ethnic makeup (official statistics are unavailable from the school board to protect the identities of the students). Two of the schools offer Grade 9–12 programming (thereby encompassing all secondary grades); whereas the other two deliver Grade 10–12 level classes. However, all students must be at least 16 years old to enroll in the alternative schools. Thus, the majority of the students have attended at least one other high school prior to enrollment in the alternative school. Three of the schools follow regular school day hours of 9 a.m. to 3 p.m.; while the fourth operates on a university-like timetable, where students attend only when classes are being held.

This research followed (Seidman, 2013) semi-structured interview format. All participants with the exception of two were interviewed individually (Kendra and Liz from Stoneridge Alternative² requested to be interviewed together). Four curriculum leaders, eleven teachers, and one child and youth counselor were interviewed in the four schools (four staff per school). Twelve of the participants were women, and four men. The participants were relatively diverse, with 13 staff members being Caucasian and three who are racialized people of color. Most had worked at other schools in the past, and all but two had worked in at least two schools prior to moving to their current alternative school. The amount of time the staff worked at the schools varied considerably from 8 months to 40 years.

Since the sampled schools are small, they do not have a principal/vice-principal on the premises. The administrative duties are fulfilled by the teachers, who take on the role of *curriculum leader* on a multi-year rotating basis, in addition to their teaching responsibilities. Curriculum leaders were able to offer an administrative viewpoint on managing absenteeism and the tensions embodied in the compulsory attendance policy. In turn, the teachers provided their own accounts of navigating these ethical dilemmas in their classroom. The staff were asked a variety of questions concerning absenteeism in their school. The data included in the current study, however, pertains to answers to the main research question: “What are the professional and ethical tensions alternative high school staff members experience when navigating the enforcement of mandatory attendance

²The names of the participants and their schools have been changed to pseudonyms.

polices?” The interviews were carried out and transcribed by the lead author, and thematically coded by both authors.

In the data analysis phase, the lead author read the entire interview and isolated passages pertaining to absenteeism; the official school attendance policy; and, how the staff member navigated said policy (Morrissette, 1999). Both authors then read the passages individually and made analytic memos. The authors came together and discussed the emergent themes gleaned from the passages and looked for commonalities across the interviews. We then situated our findings to what has been found in the literature.

RESULTS

During conversations with sixteen educators, across four alternative schools, the staff expressed nuanced and complex approaches to balancing the exceptional circumstances of their students whilst still following the attendance policy. As expressed by the educators in their own words below, there was an empathetic awareness of the reasons for students' absenteeism. Hence, because of attentiveness to the needs of their students, staff also expressed an interest in interpreting attendance policy as a guideline. The results of this research are subdivided into emergent themes from the data analysis. In the discussion to follow the findings below, we will return to our framing of educators as *policymakers* who are responsive to the *voluntary/involuntary* absences of these alternative school youth.

Awareness of and Responses to Student Absenteeism

Absenteeism is a serious issue in all of the sampled alternative schools, and weighs heavily on the minds of the sampled educators. The majority of staff members framed absenteeism as the biggest problem their school faces, and that nearly all students exhibit absenteeism to some degree. The staff reported that on average, half of the students were absent daily throughout the year in all of the schools, with absenteeism ranging from as low as 20% to as high as 80% in specific classes (official attendance rates were not made available by the school board). However, rather than despairing, the staff take active measures to locate the cause of an absence. Aided by the small size of the alternative school(s), the staff are acutely aware of the causes of their students' absenteeism. When asked to explain why their students miss school the staff members had detailed and complex responses that reflected the convoluted and interrelated nature of absenteeism, where students were absent for multiple and overlapping reasons. Moreover, the staff articulated an acknowledgment of the voluntary and involuntary absences their students exhibit. For example, Samantha, the curriculum leader at Meadows Alternative spoke about the more voluntary aspect of absenteeism, noting:

There's general disengagement as well, they'd rather go and do something else with their friends, play video games, watch movies, do whatever, drugs as well, those kinds of things. And they see no relevance to school in their everyday life.

Staff members, however, are also mindful of the difficult nature of their students' lives, and how these circumstances impact their ability to come to school consistently. Erin, a teacher and guidance counselor at Pine Alternative discussed the issues her students face at home,

Whether students themselves have mental health concerns or issues, struggles, or their families do, so struggling to help keep a family on its feet as well, so if parents aren't working then they're working holding a job, trying to support the family or struggling with the barriers of having parents that have mental health issues, bring to their struggles personally.

Thus, rather than looking at absenteeism as one dimensional (e.g., excused/unexcused), as articulated in the policy, the staff members seek more contextual explanations for their students' absenteeism. Additionally, they are aware of the fact that the absenteeism is often caused by factors outside of the school, many of which are structural rather than motivational. Kendra, the curriculum leader at Stoneridge Alternative spoke about these external barriers to attendance,

There are issues that our kids face that are far greater than us. We could care all we want in the world and be the greatest, most welcoming inviting place, but their issues are so deep that there are students that are very hard to reach, not impossible, we never give up, but those issues are far greater than we are.

Kendra's comment highlights the involuntary nature of absenteeism for a subset of her students. She, along with many other staff members, is cognizant that their school has limited potential to reduce the overall levels of absenteeism. However, the staff do not take this as an excuse for resignation, and remain committed to reducing absenteeism. Many staff responded that each student is unique, and so are the causes of their absences. As one of the curriculum leaders expressed, “we try to treat each student's absenteeism as an individual occurrence” (Samantha, Meadows). The management of absenteeism is extremely individualized, and Kendra (curriculum leader, Stoneridge) attributed the ability to individualize to the small nature of the school(s):

That individualized program, the individualized attention, the individualized need is the most important. And every single kid knows that they are cared about and that they are an individual when they walk in here...it would be very hard to do that in a school of a 1,000. At a school of a hundred you can reach every kid. We can tell you everything that is going on with every kid at almost any given time.

A number of the educators spoke about various accommodation strategies that help to mediate students' personal complexities with the academic expectations required for them to graduate:

The extra time we give to our students to hand in stuff is pretty amazing. We're pretty forgiving you know? A student can miss a week of the quad and still get the credit if they make up the work that sort of thing. So we bend over backwards (Peter, teacher, Stoneridge).

We have something we call Do or Don't Day. So a week before midterm, a week before finals, we have a day, a catch up day where you can hand in anything from prior. So the answer is never "no." If you've got it, hand it in (Anna, teacher, Meadows).

I've had students who have messaged me and said "ohh I can't make it because of this reason" and I've had to modify how, what day the test is actually on or whatever the case may be. There's – it's open deadlines pretty much. I regularly give out my assignments with full explanation sheets in case they want to do it independently, so there's an opportunity to do that (Natalie, teacher, Pine).

If a student has to leave for work we'll probably say "okay" and "let's talk about [it], we'll see you tomorrow and we'll catch up." So we still keep in mind the student having a chance to be successful... I mean the philosophy is one where we're supporting students to achieve and do well, so if there's a reasonable reason why a student is late or hasn't handed something in, I don't have a problem with accommodating that and working on a plan for them to catch up (John, teacher, Meadows).

Obviously we are not a no-attendance school. So students are expected to attend. But that being said, we do know our population, and so what we do is we make accommodations for students who are unable to come (Anthony, teacher, Bridgeport).

The last quote by Anthony presents the challenging dilemma evident in all of the sampled alternative schools, namely that they are all bound by the mandatory attendance policy set out by the school board. Knowing their students' difficulties coming to school, many of which may not be traditionally "excused" but are nevertheless involuntary, brings about a trying task for these educators: navigating the attendance expectations specified by the school board, without compromising their students' access to a high school education. Many did so by interpreting the policy as a guideline, rather than as rigid and uncompromising stipulations.

Interpretation of Policy as Guideline

When asked about the official attendance policy of their school, the staff members had varying responses. Four staff members had an understanding that attendance is compulsory at their school, but the official policy itself had little consequence in their day-to-day functioning as educators, as Anna, a teacher at Meadows described:

We're a mandatory attendance school, as much as our kids would tell you differently. So they're expected to attend from 9:30 to 3:30 every day... our attendance policy is if you're late you need a late slip, if you miss you need a doctor's note. But, I mean we enforce it only as far as anyone is able to of course, right?

While a quarter of the participants saw attendance as a general requirement of their school, eight staff members framed the attendance policy as originating from the Ministry of Education and/or school board. Samantha, a curriculum leader at Meadows Alternative, referred to the board policy when describing the attendance expectations in her school,

Well the school board has a policy: if a student misses 12 days in a row, an attendance counselor has to be notified if they're under

18. If they're over 18, they are to be demitted after 12 days, that's the official attendance policy.

What is of interest is that while most educators were cognizant of the "demitting" rule, it is not explicitly stated in the official school board policy. As mentioned in the section Introduction, the school board's attendance policy only dictates actions for students under the age of 18, as the school board has a legal obligation to ensure they attend. Once a youth turns 18, there is a "gray zone" where there is no legal impetus for the board to ensure the student is enrolled and attends school. Thus, schools have the legal right to remove students who are over the age of 18 for non-attendance. It appears that this "unofficial" demitting policy is passed down from the school board to the principals who oversee a number of alternative schools, to the curriculum leaders who serve as the administrators in the sampled schools. In fact, all of the curriculum leaders framed their school's attendance policy in terms of its obligation to follow the one set out by the school board, which in turn, takes its directive from the *Ontario Education Act* stipulating mandatory attendance.

The teachers, however, reframe this construct of "policy" to fit with their ethical and moral stances of what is best for their students. Rather than viewing attendance expectations as formalized "policy," teachers framed it as more of a code of conduct or guideline that should be followed—suggesting there is room to interpret a guideline more loosely than an authoritative policy. One staff member expressed that she,

Would rather use the language *guideline* than *policy* because board policy is often, most often, more a guideline – [compared to] when you break policy, there's not a lot of repercussions" (Barbara, curriculum leader, Pine, emphasis added).

In speaking to the school's official policy, Samantha (curriculum leader, Meadows) differentiated between what the school board states and how it is understood in her practice:

Attendance policy here is what we have written in our code of conduct, and it's just a code of conduct, it's not a policy *per se*... So the policy in terms of attendance? We go by the guidelines of what the [name of school board] outlines, but we've got so many students who are away for reasons like, long term reasons, and they have medical issues or psychological issues where they're away for more than 12 days in a row.

For Samantha, the policy as a "guideline" is integral to accommodate students with mental and physical health needs, but also to keep the school in operation:

We don't have so much of a policy that is enforced as much as strategies to intervene if that makes any sense. Because if we enforced any hard and fast rules on policy then we'd have no kids, right? So we have to be super flexible.

Enforcing these "hard and fast rules on policy," as Samantha expressed it, fails to account for the reasons that brought these youths to the alternative schooling system in the first place. Kendra and Liz, a curriculum leader and school

counselor, respectively, at Stoneridge, spoke of their personal and professional ethos that recognizes the inappropriateness of enacting the same punitive practices and policies they know have not worked for their students in the past:

Kendra: Our personal philosophy is that we're not punitive. We're high reward, high praise. Punitive has not worked for them. They've been in schools where they've been consequence, they've been kicked out, they've been –

Liz: Suspended for a whole bunch of reasons.

Kendra: And that hasn't worked. That's why they ended up here. So of course if a student does something wrong, we're not going to reward them, but when they do correct behavior we high, high, high praise. . . . Because if they're getting scolded every time they walk through the front door they will stop walking through the front door, and that is what's happening in many of their high schools. They will tell you about that – that is their experience.

Liz: They were glad to leave their mainstream schools.

Kendra: And some would criticize us, I think, for the softer approach. But I've been doing this for 20 years, and the success rates that we've both had – but I'll speak to me in particular – have been fabulous. So there is something that we are doing right.

Liz: You just got to try to figure it out what it is that you have to do for each student. Not put them all into a box and treat them all the same.

For Kendra and Liz, demonstrating responsive behavior management practices is integral to accommodating students who have had punitive-centered schooling experiences thus far. Other staff also spoke of this individualized, “softer” approach to accommodate students' involuntary absences that might not be formally “excused” by the school board. Knowing that many of their students wish to attend, but cannot do so, the staff members find creative ways to ensure their students receive an education that is otherwise afforded to students who do not have difficult personal lives impeding their ability to attend school consistently:

[We] deal with them with a bit of a softer touch. But if that doesn't work, we're still bound, we still have to do referrals to attendance counselors, we still have to follow the same policies. . . . you're supposed to demit them after 12 days of non-attendance, we stretch that *all* the time (Amanda, curriculum leader, Bridgeport, emphasis for interviewee inflection)

We treat them with a bit more care and concern than other schools which are bigger. . . . We have a genuine concern because we are experienced with students who are on their own or who live on their own, or who are in tougher socioeconomic circumstances, so the student is probably going to realize that we actually care about what's happening and we understand. So we're not so quick to punish. We're more here for support and figure out, you know, what can be done (John, teacher, Meadows).

I think if alternative schools didn't exist for these students they'd drop out, right? If they were forced to be at school from 9 to 3 or 3:30, and heavy regimented school where late marks are given and deadlines are definite, there's students that would 100% I think drop out. . . . When we provide alternatives to the mainstream system, we're providing additional opportunities for students to achieve in something that's very traditional still, right? (Erin, teacher and guidance counselor, Pine)

I mean there's a 12 day policy – you probably know a lot about the policy – so in traditional schools 12 [days] you know, that's the gauntlet, the guillotine – it goes down. In this type of school, we're emailing, we're calling, we're trying to set up meetings, we're trying to push that further so that we can have more wiggle room to reengage (Barbara, curriculum leader, Pine).

These statements indicate the commitment the staff members have to ensure their students are given an equitable chance to complete their schooling. The staff effectively resist and co-opt policy when they see it as incongruent with their students' academic interests. The educators in our sample, much like most others, are nonetheless bound by the policy, and the curricular leaders acknowledged having to demit students for non-attendance. However, the demitting is done as a last resort, and the staff spoke about trying to find ways to avoid using this consequence.

Lessening the Severity of Demitting

In attempts to “stretch” the 12 day rule that culminates in a student being demitted from roll, the staff spoke of interrupting the 12 day consecutive streak with an “excused” absence in the attendance tracking system. When employment or being a parent and taking care of a sick child might be keeping students at home for longer than 12 days, an “excused” absence (e.g., student sickness) can be entered into the attendance tracking system as a “legitimate” absence to break the streak,

If a student calls and says that they're sick or something, you can put something in the system just to buy you a bit of time, so you don't have to demit them. We'll do whatever the work arounds [are needed] to avoid demitting. And if we have to we'll demit with a note saying they can re-enter at any time (Amanda, curriculum leader, Bridgeport).

In the case that a streak is not broken – as Amanda eludes to here – and the student must be demitted, it is done so with an asterisk: demitted but with the opportunity to re-enroll at a later time. Although still following policy stipulations of demitting habitually absent students, the alternative school educators co-opt the policy by saving a spot for them whenever they are able to return. With this, the message is conveyed to the students that they always have a place at the school, regardless of the board-mandated attendance policy. However, such a precarious system is not ideal, and Kendra and Liz (Stoneridge) explained how there is still a risk of losing some students in the process:

Kendra: We're so afraid if we just demit them they'll never go back to school.

Liz: And usually when they are not attending there's a reason behind it, so that's why we like to give them those 12 days. A lot will, some don't contact us unfortunately, but the majority do and let us know what's going on in their lives and then we set up meetings – we try to capture them back in that way.

Kendra: And if a student does leave or has to be demitted after 18 because of the 12 consecutive absences, we will take them back in the next quad or in September to retry again because we do want to give a student every possible opportunity that we can.

Through these actions the severity of the demitting process is lessened, and the results less final. Even when forced to carry out a policy and set of actions they disagree with, the curricular leaders temper the harsh repercussions associated with demitting a student. While specific numbers of demits were unavailable, the staff were unequivocal in their responses that demitting is done as a last resort, and is rather infrequent. Informed by the causes of their students' absenteeism the decisions and actions of the staff members are indicative of them taking on active policymaker roles, as the staff seek to co-opt and appropriate the policy to best meet the needs of their students.

DISCUSSION

When revisiting what these alternative school educators expressed, what is most striking is their commitment to their students' education, not only as dedicated educators, but as advocates for youth who otherwise will be denied an education due to their difficult life circumstances. Our participants conveyed a belief that the local school board's attendance policy is unresponsive to the exceptional realities of their students. As such, we were drawn to consider the ways in which the staff consciously modified the policy to construct an unauthorized policy—as we had prefaced in our introduction. In our context of Ontario alternative high schools, with a demographic of students who are predominantly over the age of 18, the staff members spoke to the ways in which they enact unauthorized policy to meet the contextual needs of their students. Despite the excused/unexcused protocol for “legitimate” absences outlined in the school board policy, the staff exercised their professional discernment to determine what constitutes a reasonable cause for an absence. In recognizing that their students are both voluntarily and involuntarily absent (Birioukov, 2016), the curriculum leaders and teachers expressed ways in which they interpret, co-opt, appropriate and yet still uphold the school board policy, in an attempt to provide their students with equitable opportunities to attain a high school education.

Voluntary/Involuntary Absences

The staff members' management of absenteeism is directly informed by their differentiation of what they consider to be “legitimate” absences as opposed to the narrowly sanctioned absences outlined by the school board. The sampled educators treat their students' absences as individual occurrences, and evaluate the causes of the absence, as well as the necessary responses from the school. Rather than relying on the “excused/unexcused” absence categorization used by their school board the staff utilize their own direct knowledge of the students' lives to demark whether the absence is largely willful (e.g., voluntary) or structural (e.g., involuntary). It is this distinction between voluntary and involuntary absences (Birioukov, 2016) that informs the policy appropriation work of the educators in the sample. The staff members know that the attendance policy has been used to marginalize their students, and are unwilling to fully comply with its mandate.

Appropriating Policy for Equitable Opportunity

Critical educators of policy implementation are aware of their active roles as *policy makers*, who “recognize their action (or inaction) may challenge or perpetuate inequities beyond school walls” (Winton and Pollock, 2013, p. 50). For our participants, the knowledge of their students' personal realities and causes for absenteeism instigates a sense of advocacy on behalf of their students who are penalized by the attendance policy. This advocacy, we argue, takes shape in the form of policy appropriation. The educators guard against the one-size-fits-all attendance policy imposed by the school board; tempering it with their local knowledge of their students' realities and what feasible attendance expectations might look like. The policy appropriation in these alternative schools is characterized by teachers and curriculum leaders who adhere to the attendance policy and maintain high attendance expectations for their students, but who are not afraid to “do whatever the work...to avoid demitting” (Amanda, curriculum leader, Bridgeport). Many of these alternative school youth have already been punished by the school board's attendance policy in their previous mainstream schools; many, in fact, were demitted from their former high school(s) for this reason.

The individualization and assessment of each student's absenteeism as an individual issue prompts the use of accommodation strategies designed to allow students to miss some class without penalty. As discerning practitioners, the alternative school educators are sensitive to the complex lives their students live outside of the classroom; articulating a sense of responsibility to be responsive to the “inconvenient complications” that students' personal lives bring to their practice (Phelan, 2015, p. 17). Guided by an ethos of attendance-as-guideline, the curriculum leaders and teachers of these alternative schools enact loosely interpreted attendance expectations for their students who may have exceptional and pressing circumstances that make regular attendance difficult. In interpreting mandatory attendance to be more of a suggestion than expectation, the staff rationalize the ways in which they exercise their professional agency as critical policy implementers, not just passive policy followers.

While the school board stipulates that 12 consecutive days of absences are grounds for demitting a student, these educators described the 12 day rule as “the guillotine” to their students' education. These alternative school staff recognize the significance of appropriating the stipulations of the attendance policy to better align with the realities of their student population. By being willing to excuse students who must leave early for work, or actively scheduling re-engagement meetings for students who otherwise would be demitted, the staff espouse an intrinsic obligation to mediate the prescribed attendance policy with their students' life circumstances. The appropriation of policy occurs when educators exercise their knowledge of the local, which in turn transforms the authorized policy into *unauthorized* policy as it is informed by its respective context (Levinson and Sutton, 2001). Such appropriation, however, can simply be interpreted as policy “implementation,” in that the enactment of policy is always

inevitably mediated by the beliefs of the educators responsible for implementing it (Honig, 2006; Levinson et al., 2009; Winton and Pollock, 2013). Whether this process is considered to be policy appropriation, or simply the subjective process of policy enactment, is open to interpretation. Nevertheless, what becomes apparent from such policy appropriation is the way in which these educators chose to advocate for their students' education in a system that does not.

It may be argued that the permissive nature of the sampled alternative schools normalizes absenteeism, and enables youths to miss more school than they already are. This is one of the more frequently cited criticisms of alternative schools in general, as there is concern that grouping large numbers of at-risk youths will only exacerbate their issues (Kilma et al., 2009; Flannery et al., 2012). However, the staff in our sample refuted these allegations by pointing to the fact that their students have already attempted and "failed" in the mainstream setting's rigid accountability measures. For these alternative school youths, the system as-is has not worked. In their situation, the schooling system has already marked them as "failures" and/or as "drop-outs."

There is a sense that there is nothing left to lose in the creation of an accommodating school structure.

The alternative high school setting is a last-chance schooling system designed to accommodate the difficult home-life realities many absent students face, and to provide them with an education that mainstream schools have not (O'Brien and Curry, 2009). Yet, alternative schools are still bound by the same attendance policy that penalized their students' previous absences in the mainstream setting. The policy continues to be the black cloud hanging over the absentees' education, who perpetually feel the pressure to be seated in the classroom every school day, regardless of the difficulties impeding them from doing so. Our educator participants, however, recognize the ways in which reprimanding students does little more than push them even further from the end objective of earning a high school diploma. With this, appropriating the attendance policy is a necessary accommodation strategy to ensure students receive an equitable opportunity to a high school education.

Demitting With an Asterisk

Integral to policy appropriation in alternative schools are the ways in which educators outwardly resist uniform and mainstream policies. In the name of providing an "alternative" schooling experience, alternative schooling systems are often at odds with policies catered to mainstream schooling. As Hemmer (2014) experienced with alternative school educators, our staff were also proud to speak to their "maverick and/or symbolic gestures of resistance" (Hemmer, 2014, p. 12), as they exercise their rights as alternative educators in a system that is constructed by mainstream-informed universal policies. Being accountable to the board-wide mandatory attendance policy presents our alternative school educators with ethical dilemmas. As much as they may attempt to engage, re-engage and prolong a student's removal from the alternative school, ultimately the curriculum leaders are obligated to demit students after 12 consecutive absences. This finding highlights the inequitable structure of the compulsory attendance policy of the sampled school board.

The creation of the "gray zone," where students over the age of 18 can be legally removed from school rolls is particularly egregious, as it allows schools to discard students deemed to be too "difficult" or hard to manage. The demitting practice does take place in the sampled alternative schools, but by demitting with an asterisk—suggesting that students can re-enroll at a convenient time—the educators have made ways to accommodate the peculiarities that have previously barred these students from academic success. Whereas, professionally the staff are expected to demit perpetually absent youth, our participants were vocal in their relentless commitment to their students' education, even after they were demitted. Re-engaging and re-enrolling these students is the ultimate goal, post-demitting.

Limitations and Considerations for Future Research

As with all qualitative research, this study is context-specific, and offers a single account of 16 staff members working in four alternative schools within a single municipality. Thus, the transferability of the results to other locales may be difficult and undesirable. Conversations with educators "on the ground" provide a narrow view of the attendance policy and how it is to be enacted in an alternative school setting. It would be useful to investigate how "higher level" officials (e.g., principals; superintendents; policymakers) conceptualize absenteeism in relation to an adequate attendance policy. While we have highlighted some of the shortcomings of the school board's attendance policy, and its potential to negatively affect at-risk youths, a more detailed analysis of its rationale is needed. Likewise, the issue of permissiveness and the enabling of further absenteeism in alternative settings warrants consideration.

CONCLUSION

Every day thousands of children miss school. They do so for a myriad of reasons, with many being forced to miss school *involuntarily*. These youths may desperately wish to attend, but the circumstances of their lives preclude them from doing so. Not experiencing success in mainstream schools, these adolescents may find themselves in the alternative setting—a setting designed to be more flexible and accommodating to their absenteeism. However, as this research shows, alternative schools in Ontario, Canada are confronted with the mandatory attendance policies passed by the Ontario Ministry of Education and local school boards. These authorized policies treat absenteeism as a criminal act, and reprimand students for non-attendance. Alternative school staff members hence become *de facto* policymakers as they move from enacting *authorized* to *unauthorized* policy (Levinson et al., 2009). The school personnel see a misalignment between the policy and their students' best interests. Being intimately aware of their students' often involuntary absenteeism, many interpret the attendance policy in a way that is more ethically reflective of their students' needs. While the alternative school staff take steps to appropriate the authorized policy to ensure their students are treated ethically, there are no guarantees that other educators follow suit. Considering that a number of youths

report being pushed out of mainstream schools due to non-attendance (Caine, 2013), it is likely that mandatory attendance policies are used to rationalize their removal.

Wanting youths to be in school consistently is a desire all educators share; however, the feasibility of this goal is questionable. As this study has documented, the current one-size-fits-all compulsory attendance policies marginalize and disadvantage the most vulnerable students in both mainstream and alternative schools. These youths are effectively punished for being unable to come to school. Rather than reducing absenteeism these policies do quite the opposite, and cause youths to miss more school than they already do. The concerning practice of demitting students because of non-attendance is reprehensible, because it allows schools to shed their responsibility for ensuring that all students are given an equitable opportunity to succeed. A failure to reevaluate how attendance policies are developed and enacted will propel the continuous cycle of educational marginalization evident in Canada.

DATA AVAILABILITY STATEMENT

Restrictions apply to the data sets: The datasets for this manuscript are not publicly available to protect participants'

confidentiality due to the sensitive and personal information that was collected as part of the interviews. The ethical review board of the University of Ottawa provides all human participants with the option to share their information only with the lead researcher and research team. Making their transcripts public compromises the confidentiality of the participants. Requests to access the datasets should be directed to Anton Birioukov-Brant, abiri066@uottawa.ca.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Ethical Review Board, University of Ottawa Policy, Research and Information Services. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

AB-B was the principal investigator who designed and carried out the research, secured ethical consent from the University of Ottawa, school board, and participants, conducted and transcribed the interviews. AB-B and KB-B coded the interviews, reviewed the literature, and wrote the manuscript together.

REFERENCES

- Attwood, G., and Croll, P. (2015). Truancy and well-being among secondary students in England. *Educ. Stud.* 31, 14–28. doi: 10.1080/03055698.2014.955725
- Bates, R. (2006). Educational administration and social justice. *Educ. Citizenship Soc. Justice* 1, 141–156. doi: 10.1177/1746197906064676
- Birioukov, A. (2016). Beyond the excused/unexcused absence binary: classifying absenteeism through a voluntary/involuntary absence framework. *Educ. Rev.* 68, 340–357. doi: 10.1080/00131911.2015.1090400
- Brandibas, G., Jeunier, B., Clanet, C., and Fourasté, R. (2004). Truancy, school refusal and anxiety. *Sch. Psychol. Int.* 25, 117–126. doi: 10.1177/0143034304036299
- Branham, D. (2004). The wise man builds his house upon the rock: the effects of inadequate school building infrastructure on student attendance. *Soc. Sci. Q.* 85, 1112–1128. doi: 10.1111/j.0038-4941.2004.00266.x
- Caine, V. (2013). "Literature review," in *Composing Lives in Transition: A Narrative Inquiry Into the Experiences of Early School Leavers*, eds J. D. Clandinin, P. Steeves, and V. Caine (Bingley: Emerald Group Publishing Limited), 15–42.
- Cox, S. M. (1999). An assessment of an alternative education program for at-risk delinquent youth. *J. Res. Crime Delinq.* 36, 323–336. doi: 10.1177/0022427899036003004
- D'Angelo, F., and Zemanick, R. (2009). The twilight academy: an alternative education program that works. *Prev. Sch. Fail.* 53, 211–218. doi: 10.3200/PSFL.53.4.211-218
- Darmody, M., Smyth, E., and McCoy, S. (2008). Acting up or opting out? Truancy in Irish secondary schools. *Educ. Rev.* 60, 359–373. doi: 10.1080/00131910802393399
- De La Ossa, P. (2005). "Hear my voice:" alternative high school students' perceptions and implications for school change. *Am. Sec. Educ.* 34, 24–39. Retrieved from: <https://www.ashland.edu/>
- DeSocio, J., VanCura, M., Nelson, L. A., Hewitt, G., Kitzman, H., and Cole, R. (2007). Engaging truant adolescents: results from a multifaceted intervention pilot. *Prev. Sch. Fail.* 51, 3–11. doi: 10.3200/PSFL.51.3.3-11
- Ekstrand, B. (2015). What it takes to keep children in school: A research review. *Educ. Rev.* 67, 459–482. doi: 10.1080/00131911.2015.1008406
- Fantuzzo, J., Grim, S., and Hazan, H. (2005). Project START: an evaluation of a community-wide school-based intervention to reduce truancy. *Psychol. Sch.* 42, 657–667. doi: 10.1002/pits.20103
- Flannery, K. B., Frank, J. L., and Kato, M. M. (2012). School disciplinary responses to truancy: current practice and future directions. *J. Sch. Viol.* 11, 118–137. doi: 10.1080/15388220.2011.653433
- Fowler, F. C. (2013). "Policy: what it is and where it comes from?" in *Policy Studies for Educational Leaders: An Introduction, 4th Edn*, ed F. C. Fowler (Boston, MA: Pearson Education), 3–21.
- Gase, L. N., Butler, K., and Kuo, T. (2015). The current state of truancy reduction programs and opportunities for enhancement in Los Angeles County. *Child. Youth Serv. Rev.* 52, 17–25. doi: 10.1016/j.childyouth.2015.02.008
- Gaskell, J. (1995). *Secondary Schools in Canada: The National Report of the Exemplary Schools Project*. Toronto, ON: Canadian Education Association.
- Goddard, J. T., and Hart, A. (2007). School leadership and equity: Canadian elements. *Sch. Lead. Manag.* 27, 7–20. doi: 10.1080/13632430601092263
- Hamann, E. T., and Lane, B. (2004). The roles of state departments of education as policy intermediaries: two cases. *Educ. Policy* 18, 426–455. doi: 10.1177/0895904804265021
- Havik, T., Bru, E., and Ertesvåg, S. (2015). School factors associated with school refusal- and truancy-related reasons for school non-attendance. *Soc. Psychol. Educ.* 18, 221–240. doi: 10.1007/s11218-015-9293-y
- Hemmer, L. M. (2014). Response to accountability policies by principals and teachers of alternative education: a cross case analysis. *Sch. Lead. Rev.* 9, 7–17. Retrieved from: <https://scholarworks.sfasu.edu/slr/vol9/iss1/4>
- Heyne, D., Gren-Landell, M., Melvin, G., and Gentle-Genitty, C. (2019). Differentiation between school attendance problems: Why and how? *Cogn. Behav. Pract.* 26, 8–34. doi: 10.1016/j.cbpra.2018.03.006
- Hinz, E., Kapp, L., and Snapp, S. (2003). Student attendance and mobility in Minneapolis public schools. *J. Negro Educ.* 72, 141–149. doi: 10.2307/3211297
- Honig, M. I. (2006). "Complexity and policy implementation: challenges and opportunities for the field," in *New Directions in Policy Implementation: Confronting Complexity*, ed M. I. Honig (Albany, NY: University of New York Press), 1–23.

- Kearney, C. A. (2008). School absenteeism and school refusal behavior in youth: a contemporary review. *Clin. Psychol. Rev.* 28, 451–471. doi: 10.1016/j.cpr.2007.07.012
- Kearney, C. A., and Graczyk, P. (2014). A response to intervention model to promote school attendance and decrease school absenteeism. *Child Youth Care Forum* 43, 1–25. doi: 10.1007/s10566-013-9222-1
- Kilma, T., Miller, M., and Nunlist, C. (2009). *What Works? Targeted Truancy and Dropout Programs in Middle and High School*. Olympia, DC: Washington State Institute for Public Policy.
- Koyama, J. (2011). Principals, power, and policy: enacting 'supplemental educational services.' *Anthropol. Educ. Q.* 42, 20–36. doi: 10.1111/j.1548-1492.2010.01108.x
- Leonard, J. (2011). Using Brofenbrenner's ecological theory to understand community partnerships: a historical case study of one urban high school. *Urban Educ.* 46, 987–1010. doi: 10.1177/0042085911400337
- Levinson, B. A., and Sutton, M. (2001). *Policy as practice: Toward a Comparative Sociocultural Analysis of Educational Policy*. Ann Arbor, MI: Ablex Publishers.
- Levinson, B. A., Sutton, M., and Winstead, T. (2009). Education policy as a practice of power: theoretical tools, ethnographic methods, democratic options. *Educ. Policy* 23, 767–795. doi: 10.1177/0895904808320676
- Lipsky, M. (1980). *Street-Level Bureaucracy: Dilemmas of the Individual in Public Services*. New York, NY: Russell Sage Foundation.
- Mac Iver, M. A. (2011). The challenge of improving urban high school graduation outcomes: findings from a randomized study of dropout prevention efforts. *J. Educ. Stud. Placed Risk* 16, 167–184. doi: 10.1080/10824669.2011.584497
- Marvul, J. N. (2012). If you build it, they will come: a successful truancy intervention program in a small high school. *Urban Educ.* 47, 144–169. doi: 10.1177/0042085911427738
- Maynard, B. R., Brendel, K. E., Bulanda, J. J., Heyne, D., Thompson, A., and Pigott, T. D. (2015). Psychosocial interventions for school refusal with primary and secondary students: a systematic review. *Campbell Syst. Rev.* 11, 1–76. doi: 10.4073/csr.2015.12
- Maynard, B. R., McCreary, K. T., Pigott, T. D., and Kelly, M. S. (2012). Indicated truancy interventions: effects on school attendance among chronic truant students. *Campbell Syst. Rev.* 23, 1–83. doi: 10.4073/csr.2012.10
- Maynard, B. R., McCreary, K. T., Pigott, T. D., and Kelly, M. S. (2013). Indicated truancy interventions for chronic truant students: a Campbell systematic review. *Res. Soc. Work Pract.* 23, 5–21. doi: 10.1177/1049731512457207
- Maynard, B. R., Vaughn, M. G., Nelson, E. J., Salas-Wright, C. P., Heyne, D. A., and Kremer, K. P. (2017). Truancy in the United States: examining temporal trends and correlates by race, age, and gender. *Child. Youth Serv. Rev.* 81, 188–196. doi: 10.1016/j.childyouth.2017.08.008
- Monahan, K. C., VanDerhei, S., Bechtold, J., and Cauffman, E. (2014). From the school yard to the squad car: school discipline, truancy, and arrest. *J. Youth Adolesc.* 43, 1110–1122. doi: 10.1007/s10964-014-0103-1
- Morrisette, P. J. (1999). Phenomenological research data analysis: a proposed model for counsellors. *Guid. Counsel.* 15, 2–7.
- Morrisette, P. J. (2011). Exploring student experiences within the alternative high school context. *Canad. J. Educ.* 34, 169–188. Retrieved from: <http://journals.sfu.ca/cje/index.php/cje-rce>
- Nichols, J. D. (2003). Prediction indicators for students failing the State of Indiana High School Graduation Exam. *Prev. Sch. Fail.* 47, 112–120. doi: 10.1080/10459880309604439
- O'Brien, E. R., and Curry, J. R. (2009). Systemic interventions with alternative school students: engaging the omega children. *J. Sch. Counsel.* 7, 1–32. Retrieved from: <http://jsc.montana.edu>
- Office of the Child and Youth Advocate in Newfoundland and Labrador (2019). *Chronic Absenteeism: When Children Disappear*. St. John's, NL: The Queen's Printer Government of Newfoundland and Labrador.
- Ontario Ministry of Education. (2005). *Strategies for Student Success: Programs, Strategies, and Resources to Help Students Succeed in Grades 7-12*. Toronto, ON: Queen's Printer for Ontario.
- Oreopoulos, P. (2005). *Canadian Compulsory School Laws and Their Impact on Educational Attainment and Future Earnings*. Ottawa, ON: Statistics Canada.
- Ozga, J. (2000). *Policy Research in Educational Settings: Contested Terrain*. Buckingham: Open University Press.
- Penny, A., Appel, S., Gultig, J., Harley, K., and Muir, R. (1993). Just sort of fumbling in the dark: a case study of the advent of racial integration in South African schools. *Comp. Educ. Rev.* 37, 412–433. doi: 10.1086/447207
- Phelan, A. (2015). *Curriculum Theorizing and Teacher Education: Complicating Conjunctions*. Abingdon: Routledge.
- Raywid, M. A. (2001). Alternative schools as a model for public education. *Theory Pract.* 22, 190–197. doi: 10.1080/00405848309543060
- Reid, K. (2013). *Managing School Attendance: Successful Intervention Strategies for Reducing Truancy*. New York, NY: Routledge.
- Reid, K. (2014). *An Essential Guide to Managing Attendance at Your School: Practical Resources for all School Managers*. New York, NY: Routledge.
- Saunders, J. A., and Saunders, E. J. (2001/2002). Alternative school students' perceptions of past [traditional] and current [alternative] school environments. *High Sch. J.* 85, 12–23. doi: 10.1353/hsj.2001.0024
- Seidman, I. (2013). *Interviewing as Qualitative Research: A Guide for Researchers in Education and the Social Sciences*. New York, NY: Teachers College Press.
- Simonsen, B., and Sugai, G. (2013). PBIS in alternative education settings: positive support for youth with high-risk behavior. *Educ. Treatm. Child.* 36, 3–14. doi: 10.1353/etc.2013.0030
- Stake, R. E. (1995). *The Art of Case Study Research*. Thousand Oaks, CA: Sage.
- The McCreary Centre Society (2008). *Making the Grade: A Review of Alternative Education Programs in BC*. Vancouver, BC: The McCreary Centre Society.
- Uppal, S. (2017). *Young Men and Women Without a High School Diploma*. Ottawa, ON: Statistics Canada.
- Vellos, R., and Vadeboncoeur, J. A. (2015). Rebuilding attendance practices with youth: the role of social mediation. *Educ. Stud.* 41, 91–108. doi: 10.1080/03055698.2014.955735
- Vellos, R. E., and Vadeboncoeur, J. A. (2013). "Alternative and second chance education" in *Sociology of Education*, eds J. Ainsworth and J. G. Golson (Thousand Oaks, CA: Sage), 35–39.
- Wilson, V., Malcolm, H., Edward, S., and Davidson, J. (2008). 'Bunking off': the impact of truancy on students and teachers. *Br. Educ. Res. J.* 34, 1–17. doi: 10.1080/01411920701492191
- Winton, S., and Pollock, K. (2013). Preparing politically savvy principals in Ontario, Canada. *J. Educ. Admin.* 51, 40–54. doi: 10.1108/09578231311291422
- Wishart, D. (2009). *The Rose That Grew From Concrete: Teaching and Learning With Disenfranchised Youth*. Edmonton, AB: The University of Alberta Press.

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2019 Birioukov-Brant and Brant-Birioukov. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



Rapid Return for School Refusal: A School-Based Approach Applied With Japanese Adolescents

Naoki Maeda^{1*} and David Heyne²

¹ School of Social Welfare, Kyushu University of Health and Welfare, Nobeoka, Japan, ² Institute of Psychology, Leiden University, Leiden, Netherlands

OPEN ACCESS

Edited by:

Douglas F. Kauffman,
Medical University of the Americas –
Nevis, United States

Reviewed by:

Maria Vicent,
University of Alicante, Spain
Lisa McKay-Brown,
The University of Melbourne, Australia

*Correspondence:

Naoki Maeda
naoki225@phoenix.ac.jp

Specialty section:

This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Psychology

Received: 29 June 2019

Accepted: 03 December 2019

Published: 20 December 2019

Citation:

Maeda N and Heyne D (2019) Rapid
Return for School Refusal: A
School-Based Approach Applied With
Japanese Adolescents.
Front. Psychol. 10:2862.
doi: 10.3389/fpsyg.2019.02862

Cognitive behavioral therapy (CBT) is often effective in the treatment of school refusal (SR). Its usefulness is limited, however, if youth displaying SR also refuse to attend treatment sessions. In these cases parents and school staff may consider using school-based interventions that do not rely on face-to-face assessment and treatment with the young person. The current study examined the effectiveness of a school-based intervention applied in Japan to achieve rapid return to school among adolescents displaying SR. Between 2009 and 2015, the parents of 62 adolescents displaying SR were invited to implement a school-based rapid return approach. Thirty-nine parents agreed to implement the approach and 23 decided to wait until their child spontaneously attended school. Of the 39 cases in which the approach was implemented, 28 adolescents (72%) resumed attendance at their original school, 2 (5%) transferred to another school, and 9 (23%) did not resume attendance. In contrast, all 23 non-intervention cases continued to refuse to attend school for 3 months or longer, and none of these adolescents returned to regular school attendance within 9 months. This study tentatively suggests that the rapid return approach may be an effective form of intervention for adolescents displaying SR and simultaneously refusing to attend individual therapy. Because this approach is ethically complex, involving forced school attendance in adolescence, it should only be employed under specific circumstances. These circumstances are discussed.

Keywords: school refusal, school-based intervention, rapid school return, flooding, Japanese school-refusing adolescents

INTRODUCTION

School Refusal

School refusal (SR) is said to occur when a child or adolescent shows reluctance or refusal to attend school in association with emotional distress (Heyne et al., 2019). Commonly used criteria for classifying SR are those originally proposed by Berg et al. (1969) and reformulated by Berg (1997, 2002): (a) remaining at home with the knowledge of the parents; (b) an absence of severe antisocial behavior, apart from possible aggressiveness when the young person is forced to go to school; (c) parental attempts to get the child to attend school; and (d) displaying emotional upset at the prospect of attending school. SR occurs among 1–2 percent of the population of school-aged youth¹ (Heyne and King, 2004) and the peak age of onset is in early adolescence (Heyne et al., 2014).

¹The term 'youth' is used to refer to children and adolescents.

SR is regarded as a serious problem in the fields of medicine, welfare, and education (Nishida et al., 2004) with negative short- and long-term consequences (Maynard et al., 2018). Short-term consequences include poor academic performance, family difficulties, and worsening peer relationships, while long-term consequences include academic underachievement, employment difficulties, and increased risk of psychiatric illness (Fremont, 2003; Sewell, 2008; Heyne et al., 2011). Without appropriate intervention SR may be prolonged and become more difficult to treat (Glaser, 1959; Hersov, 1972; King et al., 1998; Okuyama et al., 1999; Sonoda et al., 2008). The prolongation of SR increases the youth's anxiety about school return (Warnecke, 1964; Terada, 2015) and likely reduces their motivation for resolving an aversion to attending school.

School attendance problems (SAPs) like SR are a major concern in compulsory education in Japan, where youth are required to attend 6 years of elementary school (ages 7–12 years) and 3 years of junior high school (ages 13–15 years). The Japanese Ministry of Education, Culture, Sports, Science and Technology (Ministry of Education, Culture, Sports, Science, and Technology-Japan (MEXT), 2003) defines SAPs as absence from school or inability to attend school on more than 30 full days a year, due to physical, psychological, social, and/or emotional factors, excluding cases involving medical and economic reasons for absence. According to the Japanese government (Ministry of Education, Culture, Sports, Science, and Technology-Japan (MEXT), 2017) the number of elementary school students displaying a SAP is ~35,000 (0.5% of elementary school students), the highest rate since data collection began in 1991. Among junior high school students the number is ~110,000 (3.3% of junior high school students), also the highest rate since 1991. In addition, there are many youth who visit the school nurse's office during the school day or attend adaptation classes and some of these would fulfill partial criteria for SR (Maeda, 2016).

Clinic-Based Psychosocial Treatment for School Refusal

In the last 20 years, studies of treatment for SR have focused mainly on cognitive behavioral therapy (CBT; e.g., King et al., 1998; Last et al., 1998; Ollendick and King, 1999; Bernstein et al., 2001; Heyne et al., 2002), confirmed by a recent meta-analysis (Maynard et al., 2018). The main goal of CBT for SR is to help youth resume a normal developmental pathway via a reduction in emotional distress and a return to regular school attendance (Heyne and Sauter, 2013). Common CBT interventions applied with youth are psychoeducation, relaxation training, social skills training, cognitive therapy, and exposure (Heyne, 2006). Parents are provided with psychoeducation and supported in the use of behavior management strategies (e.g., instruction-giving; planned ignoring; positive reinforcement) aimed at helping the young person attend school (Heyne, 2006).

Graded exposure to school attendance is prominent in five manualized CBT interventions for SR (Heyne et al., 2015). In some cases exposure is not graduated (e.g., Kearney and Albano, 2007) and emphasis is placed upon parents forcing their child to

attend school full-time, consistent with the behavioral technique of flooding. Evidence for the efficacy of flooding in cases of SR is lacking (Elliott and Place, 2019) and clinical opinion varies considerably regarding how quickly the young person should return to school and the role of parents in getting a child to school (Heyne and Sauter, 2013).

Conceptual and terminological ambiguity may have clouded discussion of these topics. For example, some of the terms used to refer to the general time-frame for return to school are “early return” (Kennedy, 1965), “immediate return vs. later return,” and “much later school return” (Berecz, 1969). The process for achieving school return has been referred to as “rapid return” (Leventhal et al., 1967), “rapid treatment” (Kennedy, 1965; King and Ollendick, 1989), “forced school attendance” (Hersen, 1971; Gullone and King, 1991; Kearney, 2003), “*in vivo* flooding” (Blagg and Yule, 1984; Blagg, 1987), “rapid vs. graduated re-entry” (King and Ollendick, 1989), and “the escorting process” (Heyne and Rollings, 2002; Herbert, 2004).

To promote clarity, Heyne and Sauter (2013) distinguished between “early full-time” and “early part-time” increase in attendance. “Early” refers to an intention for the young person to start increasing attendance within at least 4 weeks of commencing treatment, “full-time” refers to a flooding-based approach (i.e., full-time attendance from the first day of planned school return), and “part-time” refers to a graduated increase (e.g., successive increase in the number of classes attended). Many youth participating in treatment for SR choose a part-time increase in attendance (Heyne and Sauter, 2013) which is held to reduce treatment drop-out (Last and Francis, 1988).

There is no systematic evaluation comparing part-time increase (i.e., graded exposure) and full-time increase (i.e., flooding) for the treatment of SR. An early study of the acceptability and perceived effectiveness of interventions for SR suggested that behavior management by parents, involving forced school return (i.e., flooding), was more acceptable and perceived to be more effective than home tuition with psychotherapy, hospitalization, and medication (Gullone and King, 1991). That is, adolescents, parents, and professionals (teachers and nurses) all rated behavior management as more acceptable and likely to be effective than the other interventions. It should be noted, however, that the respondents were potential but not actual consumers of interventions for SR. Moreover, the case illustration used to exemplify different interventions was based on a child of 6 years and not an adolescent.

Support for interventions emphasizing flooding comes from case studies and non-randomized trials reported prior to the 1990s. For example, Leventhal et al. (1967) reported two cases that involved prompt school return implemented by parents. Both youth (a 9-year-old girl and a 15-year-old boy) returned to school when the parents abandoned a passive approach in favor of forced school attendance. The authors mentioned that early return was necessary to prevent the youths' anxiety becoming entrenched. Baideme et al. (1979) reported the case of a 9-year-old girl who was firmly escorted to school by her parents. The authors, Adlerian family therapists, insisted that quickly returning youth to school is important, irrespective of the etiology of SR symptoms. Earlier, Rodriguez et al. (1959) qualified

that the sole exception to firmly insisting on early return to school is in the case of the “overtly psychotic child” (p. 544).

The first treatment series which focused on a “rapid treatment program” was reported by Kennedy (1965). Fifty youth aged 4–16 years (80% aged 12 or younger) fulfilled the following criteria for Type I SR: first episode (100% of the youth); Monday onset following illness previous Thursday or Friday (98%); acute onset (96%); grade six and below (80%); death theme present (88%); mother’s health an issue (88%); marital harmony (94%); good parental mental health (94%); father helps in household management (84%); and parents achieve insight quickly (98%). Kennedy’s intervention encompassed a structured interview with parents and a brief interview with the young person. Parents were introduced to a plan incorporating advice about: not discussing the child’s problem at length; the father taking the child to school, avoiding discussion or questions about the child’s symptoms; leaving school promptly after dropping the child off; and socially and tangibly reinforcing the child for attendance. Forced attendance involved a willingness to use any force necessary, but it was usually sufficient that parents were convinced of the necessity of this action and were decisive. The plan also involved school staff keeping the child at school and restricting the mother’s presence at school. In a brief interaction with the young person the therapist taught him or her about the importance of facing fears, using analogies (e.g., getting straight back on a horse after falling off) as well as personal examples. All 50 cases showed complete remission of SR symptoms within 3 days. No diagnostic evaluations were conducted, but Kennedy reported no evidence of SR or symptom substitution during 8 years of follow-up. The fact that all youth aged 12 and older ($n = 13$) were successfully treated signals the possibility of applying a flooding-based approach with adolescents displaying SR. At the same time, the effectiveness of this rapid treatment program is uncertain in the absence of non-treatment controls.

Building on Kennedy’s (1965) work, Blagg (1977) developed a more comprehensive behavioral treatment encompassing four principles: (1) desensitization through humor and emotive imagery; (2) blocking avoidance through insistence upon immediate return to full-time attendance during the early stages of treatment and using force if necessary; (3) maximizing positive reinforcement for school attendance both at home and school; and (4) extinction of protests, fear reactions, and psychosomatic complaints through contingency management. *In vivo* flooding in the form of school return “even under escort” was applied when certain conditions were met, such as no genuine physical complaints for the young person, enrolment at an appropriate school, a united approach between parents and school staff, the young person has strategies for coping with school return, the school has made arrangements to help the young person settle in, and parents have received detailed advice about how to respond when their child protests (Blagg and Yule, 1984, p. 122). Specific recommendations were provided for finding a suitable escort (e.g., have two escorts when it is expected that the young person will protest strongly; consider involving close relatives when parents lack control or are extremely anxious; involve a teacher, social worker, or psychologist if the family cannot resolve the problem). Parental resistance was addressed by being supportive

while confronting parents with the reality of the situation (e.g., secondary factors arise during absence from school; life often requires facing frightening situations). Blagg (1977) considered his intervention suitable for some Type II school refusers (e.g., older youth who displayed earlier episodes of SR).

Blagg and Yule (1984) evaluated this behavioral treatment approach (BTA) by comparing outcomes for 30 youth in the BTA group, 16 youth who were hospitalized (HU), and 20 youth who received home tuition plus psychotherapy (HT). Youth were aged 11–16 years, except for 6 youth (9%) who were younger than 11 (5 of the 6 were in the BTA group). All youth fulfilled SR criteria similar to those proposed by Berg (1997, 2002). The flooding-based BTA was the most economical form of intervention, lasting 2.5 weeks on average, compared with 45.3 weeks for HU and 72.1 weeks for HT. The researchers argued that BTA was also significantly more effective than the two other approaches. An average of 1 year after treatment, successful outcome (i.e., return to full-time schooling without a lapse resulting in absenteeism) was observed for 93% of BTA cases, 38% of HU cases, and 10% of HT cases. Twenty-five of the 30 youth in the BTA group (83%) attended school at least 80% of the time, compared with 5 HU cases (31%) and none of the HT cases. The authors contended that anxiety experienced by youth or caregivers as a result of the BTA rapid approach was more than justified on account of the remarkably quick adjustments made by most children.

On the face of it, it seems that taking pressure off the young person to attend school is not an effective intervention. This perspective is shared by Berg (1985) and supported by the King et al. (1998) randomized controlled trial of CBT for SR. In the King et al. study, 88% of youth (5–15 years) whose parents received guidance in enforcing school attendance showed a significant improvement in school attendance, compared with 29% of youth in families placed on a wait-list. King et al. also noted that the youths’ participation in CBT may have helped them prepare for school return, but there were still some youth who showed reluctance or procrastination, and it is likely “that parents then played an invaluable role in prompting school attendance and escorting the child to school in a firm manner” (p. 402). The Blagg and Yule (1984) evaluation of BTA also suggests that a firm approach by parents is valuable, but conclusions based on their study need to be tempered by two main considerations. First, allocation to the three treatments was not randomized so it could be argued that easier cases were treated with BTA. Second, youth in the flooding-based BTA were significantly younger than those in the HU group.

Clinic-Based Psychosocial Treatment for School Refusal in Japan

There appear to be two main approaches to clinic-based treatment for SR in Japan. The first is a passive approach whereby pressure to return to school is removed, with an expectation of spontaneous recovery (Honjo, 1990; Kawai, 2003; Kawai and Sakurai, 2003). The goal of treatment is not the resumption of school attendance (Nakagawa, 1998; Saito, 2007; Meguro, 2009) but the development of the individual’s self-concept via counseling (Tabata, 1980; Fukaya, 1983). The other approach can

be classified as an active approach aimed at returning the young person to school as soon as possible.

One example of the active approach is found in Sonoda's (1971) report of a clinic-based behavioral intervention for youth (7–19 years) who displayed SR according to Berg et al. (1969) criteria. Forced school attendance by parents and clinic staff was utilized in 15 of 23 cases (8 youth at elementary school, 2 at junior high school, and 5 at high school). For the 8 other cases (1 at junior high, 6 at high school, and 1 at university), behavioral counseling sessions were implemented with the young person and their parents. Youth sessions focused on modifying cognitive distortions about school life. In parent sessions the emphasis was placed on the importance of blocking the youth's avoidance of school. School attendance records were utilized as an outcome measure. Fourteen of the 15 youth in the forced school attendance group returned to regular school attendance, as did five of the eight youth in the behavioral counseling group. Sonoda (1971) concluded that the flooding-based school return approach implemented by parents (mainly fathers) was highly effective for SR. This is one of the few studies reporting on forced school attendance for adolescents as old as 17 ($n = 4$). Because the study was uncontrolled, the benefit of forced school attendance relative to other treatment approaches is unknown.

Another example of the active approach is found in the work of Aida (1978). Aida hypothesized that SR among adolescents was maintained by fathers allowing the adolescent to be absent from school, regardless of the cause of SR. Fathers were thus encouraged to block the avoidance of school by using forced school attendance. Improved attendance was observed among five out of six cases of adolescent SR (12–17 years). Aida suggested that paternal blocking of school avoidance is effective for adolescent SR, adding that forced school attendance should not be used when adolescents have a mental disorder.

School-Based Behavioral Intervention for School Refusal in Japan

In rural areas of Japan there seem to be few specialized institutions that provide clinic-based psychosocial interventions resembling the active approach to treatment for SR. To illustrate, Maeda (2011) interviewed the parents of 21 Japanese youth displaying SR. These parents had consulted psychiatrists or child psychologists for treatment at clinic-based institutions in rural areas. All of the parents had been advised to just “wait and see” until such time as their child demonstrated spontaneous school return. In the region where the study was conducted, Japanese clinicians did not employ CBT for SR.

In situations where clinic-based services are not available, or an active approach to SR is not offered, a school-based behavioral intervention may be required. The first author (NM), a part-time school counselor in public junior high schools, developed a school-based support system comprising a rapid school return approach (Maeda et al., 2012a). It targets SR among adolescents (aged 13–15 years) in public junior high schools and it differs substantially from clinic-based CBT with respect to assessment and treatment. Often, school counselors are unable to undertake individual counseling with youth displaying SR (Fujita, 2009)

because the youth tend to avoid school when asked by their parents to meet with the counselor there (Maeda, 2012). In Maeda et al.'s (2012a) school-based approach, only the parents visit the school counselor who discusses intervention that does not rely upon assessment and treatment with the young person.

There is preliminary support for this school-based rapid school return approach. Maeda et al. (2012a) reported the case of a 14-year old female who refused to attend school and who threw temper tantrums when her parents tried to get her to attend. Treatment was conducted via the rapid school return approach, including physical escorting by parents, school staff, and the school counselor. Prior to the intervention, the adolescent had spent no time at school for a month. After implementation of the rapid school return approach she attended school 87% of the time and was in class 74% of the time. Maeda (2016) also reported positive results obtained with three adolescents (13–14 years) unwilling to participate in individual treatment sessions for SR. The rapid school return approach was implemented through consultation with the parents and school staff. All three adolescents resumed regular school attendance within a few days of the intervention commencing, although two showed serious resistive responses.

The Current Study

The increase in SAPs in Japan is likely to include an increase in SR. In turn, more therapists are likely to receive referrals for youth who display SR but are unwilling to participate in individual treatment sessions. In these cases, parents, school staff, and school counselors or psychologists require an alternative means to intervene. The purpose of the current study was to explore the effectiveness of the school-based rapid return approach for adolescents displaying SR. Based on the positive outcomes in case reports of rapid school return (Maeda et al., 2012a; Maeda, 2016) and the poorer outcomes for youth in a wait-list control condition (King et al., 1998), we hypothesized that the rapid school return approach would yield superior response relative to a “wait and see” approach in which parents wait for spontaneous school return. The school-based rapid return was employed with Japanese adolescents refusing to attend school and unwilling to participate in individual treatment sessions offered via psychiatric clinics or child consultation centers. A naturalistic comparison was conducted, whereby outcomes for adolescents whose parents participated in the rapid school return approach were compared to outcomes for adolescents whose parents declined to participate.

METHOD

Participants

Adolescents enrolled in junior high school in the Kyushu area of Japan were eligible for inclusion in the study if parent and teacher reports indicated that the adolescent: (a) met Berg's criteria for SR (Berg, 1997, 2002); (b) had been unwilling to participate in individual sessions for the treatment of SR; (c) had never been diagnosed with a physical or mental disorder; (d) had not been bullied or experienced other interpersonal problems (e.g., quarrels with friends; scolding from teachers); (e) spent

most of their time alone during the school day, often watching television, playing video games, surfing the internet, or reading comic books; and (f) did not have concurrent support from other specialists.

Between April 2009 and March 2015 62 cases were identified across five junior high schools (32 males, 30 females; $M = 13$ years, $SD = 0.8$ years; age range = 12–15 years). On average, each adolescent had missed 61 days of school in the current school year. Fourteen of the 62 adolescents (22%) were absent from school more than 100 consecutive school days, 24 adolescents (39%) missed more than 30 days of school (the absence-based criterion in the SAP definition of the Japanese education system), and the other 24 adolescents (39%) were absent for <30 days.

The parents of the 62 adolescents were given the opportunity to implement the school-based rapid school return approach. In 39 cases (19 males and 20 females) the parents agreed to implement the approach. These cases constitute the intervention group. The 39 adolescents were between 12 and 14 years ($M = 13.4$, $SD = 0.6$ years). In 19 of these 39 cases (44%) the families were single-parent families (17 single mothers and 2 single fathers).

The non-intervention group comprised the 23 cases (13 males and 10 females) in which the parents did not agree to implement the approach. The 23 adolescents were aged between 12 and 15 years ($M = 13.3$, $SD = 1.0$ years). Five of these 23 cases (22%) were families with single mothers while the other 18 cases (78%) were two-parent families. There was no age difference between adolescents in the intervention and non-intervention groups [$t_{(60)} = -0.52$, $p = 0.60$] but there was a greater proportion of single-parent families relative to two-parent families in the intervention group [$\chi^2_{(1, N=62)} = 4.44$, $p = 0.04$]. Furthermore, there was no difference between the groups with respect to the average number of days absent from school in the current school year [intervention group: $M = 51$, $SD = 80$ days; non-intervention group: $M = 78$, $SD = 104$ days; $t_{(60)} = -1.1$, $p = 0.26$].

Procedure

The first author (NM) was employed by the local government as a part-time school counselor for 13 junior high schools. In this role he implemented the rapid school return approach within five schools. The approach comprises four main components.

Introducing the Rapid School Return Approach to Principals of Junior High Schools

To implement the rapid school return approach it was necessary to obtain permission from school principals because they are responsible for the services offered in public compulsory education schools. The first author visited principals at 13 junior high schools to explain the adverse short- and long-term effects of prolonged SR (e.g., academic underachievement; worsening peer relationships; increased risk of social withdrawal and psychiatric illness; family difficulties; future unemployment) and discuss the school-based rapid school return approach for adolescents unwilling to engage in individual treatment sessions. The school

counselor and principals also discussed the ethically challenging issue of parents potentially physically escorting their child to school, with the help of school staff as needed. Ultimately, the principals of five junior high schools agreed to implement the approach in their schools in order to address SR. The school counselor asked that each of these principals identify staff in their school who could support the rapid school return approach.

Selecting a Support Person From Among the School Staff

There were two reasons for selecting a staff member from each school to be the support person at that school. First, it aided the collection of data about the adolescents displaying SR. Second, the support person would be involved in escorting the adolescents to school. The principal prepared a schedule indicating which staff members did not teach during the first period of the day, to identify who could be involved in the escorting process on school mornings. Usually, it was just one person from each school who assisted the parent(s) and school counselor with the cases at that school. Occasionally, other school staff joined this support person when more people were needed to escort the adolescent to school.

Developing a List of Youth Displaying School Refusal and Collecting Attendance-Related Data

The support staff prepared a list of adolescents who had missed more than four consecutive school days or 10 intermittent school days in the school year so far, and who met Berg's (1997, 2002) SR criteria. For each adolescent on the list, attendance-related data was recorded during the intervention and for at least 9 months thereafter. The attendance-related data included: (a) number of days present/absent; (b) number of classes present/absent, per day; (c) amount of time spent in other special rooms during class-time, such as the school nurse's office; and (d) characteristics of the adolescent's arrival at school from home (i.e., alone, escorted by parents, or escorted by school staff). The recording of this information for at least 9 months after intervention facilitated detection of possible relapse.

Holding a Support Meeting With the Parents and School Staff

In each case, the school counselor (NM) held a support meeting with the parent(s) of the adolescent, the classroom teacher, the school nurse, and other support staff identified by the principal. In families with two parents, both parents were encouraged to be involved in the meeting.

The two aims of the support meeting were to gather information about the adolescent and to share information about the rapid school return approach. Information about the adolescent was gathered to determine whether the conditions for inclusion were met (see "Participants"). In cases where the conditions were not met, families were referred to other services outside of the school.

Information about a flooding-based rapid school return was presented so that parents could decide if they wanted to

implement the approach, and if so, to know how to implement it. After discussing the negative effects of prolonged SR so as to encourage parental involvement (Kearney and Bates, 2005), the school counselor explained the intervention process as follows: (a) at some point after the meeting, the parents would declare to their child that they would be forcing him/her to attend school; (b) the intervention would commence 2 days after the declaration, during which time the parents would encourage their child to get ready for return to school (e.g., preparing textbooks and school uniform); (c) the parents would use planned ignoring of the child's behaviors associated with SR, such as crying, somatic complaints, or tantrums (Heyne and Rollings, 2002); (d) the parents would conceal sharp implements at home to reduce the possibility of self-harming; (e) the parents would wake their child, get him/her changed into the school uniform and escort him/her to the school gate; (f) school staff and the classroom teacher would escort him/her from the school gate to the classroom, perhaps with the support of close friends; (g) school staff would come to the family home if the parents could not escort the adolescent to school on time due to resistive responses (Blagg, 1987); (h) after arriving at school, the adolescent would be expected to stay at school all day (preferably in the classroom for the whole time), and school staff would not permit him/her to leave school early, even if the adolescent wished to do so (Blagg, 1987; Kearney and Bensaheb, 2006); (i) the intervention would be suspended if the parents requested it.

During the support meeting, the school counselor also provided the parents with information about strategies for handling resistive responses (e.g., planned ignoring; escorting by more than two people). The parents and school staff were advised of the likely occurrence of somatic complaints (e.g., stomach ache, reports of feeling unwell) and resistive behaviors (e.g., temper tantrums, verbal abuse, violent behavior, and running away from home or school). Parents and school staff needed to agree that when the adolescent engaged in self-harming behavior or threatened suicide they would stop the intervention and engage in a support meeting during which an appropriate response would be determined (e.g., seeking psychiatric support).

Participating principals and parents gave verbal consent for the intervention to be employed. Parents not consenting to the intervention are those described in the non-intervention group. Written informed consent was not requested because the first author conducted the intervention during the natural course of his work as school counselor.

Data Analysis

Outcome for adolescents in the intervention and non-intervention groups was based on a treatment response criterion defined as the adolescent achieving at least 85% attendance in the classroom within 3 months and continuing to attend classes at least 85% of the time across the next 6 months. The criterion of 85 percent attendance was based on the Japanese definition for SAPs (i.e., 30 days absence during a school year of 200 days, equivalent to 15% of school time). The amount of attendance during class time was based on a count of the number of classes attended each day, drawn

from the records kept by the support person at the school. The proportion of youth in the intervention group who achieved the criterion for treatment response was compared with the proportion of youth in the non-intervention group who achieved that criterion.

RESULTS

Table 1 presents the outcomes for adolescents in the intervention and non-intervention groups. It includes the proportion achieving full-time attendance (100%) within 1 week or regular attendance ($\geq 85\%$) within 3 months. It also presents the proportion responding to verbal prompts (e.g., "If you do not go to school with us, we have no choice but to call school staff and ask them to bring you to school") or physical escorting (i.e., guiding the adolescent by holding their hand or arm; pulling the adolescent into the car or the school building).

Intervention Cases

Twenty-eight of the 39 intervention cases (72%; 13 males and 15 females; $\chi^2_{(1)} = 0.14, p = 0.70$) were classified as treatment responders. That is, the adolescents achieved at least 85% attendance in the classroom within 3 months and for the next 6 months they were in class at least 85% of the time. Of these 28 responders, the majority ($n = 25$) involved a return to full-time school attendance within 1 week after commencement of the intervention. Of the other three responders, two involved a return to full-time school attendance within a month and the other involved return to full-time attendance within 3 months. Half of the 28 responders returned to full-time school attendance in response to verbal prompts for school attendance by parents and school staff. In 12 of these 14 cases the return to school occurred on the first day of intervention. The other 14 treatment response cases involved physical escorting to school, with 13 of the 14 returning to full-time school attendance within 1 week. For those 14 cases only requiring verbal prompting, the average number of days absent from school prior to intervention was 63.7 ($SD = 104.1$), whereas the average number of days absent among the 14 cases requiring physical escorting was 39.1 ($SD = 68$). There was no significant difference between these two groups [$t_{(26)} = -0.74, p = 0.47$]. All 14 cases requiring physical escorting showed serious resistive responses when parents and school staff tried to escort them to school (e.g., temper tantrums, screaming, clinging to the bed, a sit-in protest, hiding in the toilet). There were no reports of injury for these 14 adolescents, their parents, or school staff.

Two of the 39 intervention cases (5%; both female) transferred to other schools during the intervention. Outcome data was not available following the change of school. One case involved a change of school due to the strong desire of the adolescent and her family, and the other case involved a change of school for unspecified family reasons.

Nine of the 39 intervention cases (23%; 6 males and 3 females) were classified as non-responders. In five of these cases (4 males and 1 female) the parents and school staff discontinued the escorting process within a month due to the adolescent's serious

TABLE 1 | Characteristics of the return to school according to the outcome of intervention.

Group	Number of cases	Outcome	N	Type of intervention	Sex	Full-time attendance (i.e., 100%) within a week	Regular attendance (i.e., ≥85%) within 3 months
Intervention	39	Response	28	Physical (14)	Male	7	13/14
					Female	7	
				Verbal (14)	Male	6	12/14
					Female	8	14/14
		Non-Response	9	Physical (9)	Male	6	4/9
					Female	3	0/9
				Verbal (0)	Male	0	NA
					Female	0	NA
		Change of school	2	Physical (1)	Male	0	1/1
					Female	1	NA
				Verbal (1)	Male	0	0/1
					Female	1	NA
Non-intervention	23	Response	0	NA	NA	NA	NA
		Non-response	23	NA	Male	13	0/23
					Female	10	0/23

Response = 85% attendance in the classroom within 3 months, and at least 85% attendance in the classroom across the next 6 months. NA, Not applicable.

resistive responses such as violent behavior against parents or school staff, or running away from home and school. There were no reported injuries for these five adolescents, their parents, or school staff. Of the cases in which escorting was discontinued, two adolescents continued to be absent for more than a year, two adolescents were in their final year and consistently refused to attend school until the end of junior high school (~6 months later), and one involved the adolescent attending school mornings at a special education classroom for 3 days a week over 6 months.

The other four non-responders (2 males and 2 females) temporarily achieved regular school attendance following the intervention, but there was relapse to SR within 3 months. Within these 3 months, the parents in all four cases decided to discontinue the rapid school return approach. In one case the mother discontinued without reason, and her child attended school intermittently for a year (54% attendance). In the other three cases the parents stated that they discontinued because other clinicians had advised them to wait until spontaneous recovery occurred. In these three cases, two adolescents persisted in their absenteeism for more than a year and one attended 90 min of special education classes 3 days a week for 7 months.

Non-intervention Cases

Of the 62 families invited to participate in the rapid return approach, 23 (37%) decided to wait for the adolescent's spontaneous school attendance. In all 23 cases, SR continued for more than 3 months, with none of these adolescents returning to regular class attendance within 9 months. Thus, none of the non-intervention cases fulfilled the criterion for treatment response. Of the 23 cases, 15 involved continued absenteeism for more

than a year, 5 involved intermittent attendance in an individual study room at the school, and 3 involved the adolescent attending classes <30% of the time.

DISCUSSION

There are few reports of treatment for SR when youth refuse to attend therapy. The current study examined the effectiveness of a school-based rapid school return approach for these cases. Following, we discuss uptake of the intervention among Japanese school principals and parents, examine the outcomes, consider cultural influences on the use of rapid school return, present indications and contra-indications for its use, and reflect on the limitations and implications of the study.

Uptake of the Rapid School Return Approach

Of the 13 principals introduced to the school-based rapid school return approach, five agreed to it being used in their school. They expressed the belief that simply waiting for spontaneous recovery is an unethical practice because it fails to ensure that adolescents engage in compulsory education. The eight principals who did not agree to the approach being used in their school expressed the belief that SR is a family issue which should not be addressed by school staff but via treatment offered in psychiatric clinics or child consultation centers.

Across the five participating schools there were 62 adolescents displaying SR. The parents of 23 adolescents decided to wait until their child attended school again, constituting the non-intervention group. The intervention group comprised 39 cases in which parents agreed to implement the rapid school return

approach. The majority of parents in the intervention group expressed the intention to quickly return their child to school even though this could be a burden for them as parents. Moreover, one-third of parents in the intervention group wanted to participate because their child's SR had worsened following advice from staff at a psychiatric clinic or child consultation center to simply wait for spontaneous recovery. It is noteworthy that there was a greater proportion of single-parent families in the intervention group. In Japan, parents who are single (mostly mothers in the current study) may be more likely to accept the rapid school return approach because of a sense that they are struggling to deal with the SR on their own, exacerbating their sense of stress.

Outcome of the Rapid School Return Approach

Twenty-eight of the 39 intervention cases (72%) were classified as treatment responders, while none of the 23 non-intervention cases returned to full-time school attendance within 9 months, supporting the hypothesis. The fact that there was a greater proportion of single-parent families among the intervention cases discounts the notion that intervention cases were more successful because they more often contained two-parent families.

When parents escort their child to school, somatic complaints, protests, crying, temper tantrums, and negotiation are all likely to occur (Heyne and Rollings, 2002). In the current study, parents and school staff implementing rapid school return were confronted with a variety of resistive responses but they ignored these and persisted in escorting the adolescent to school, in accordance with the school counselor's guidance. This is a crucial aspect of the rapid school return approach. If parents and school staff commence but then discontinue the escorting process, the adolescent's avoidance of school is not eliminated and may actually be reinforced (Maeda et al., 2012a). In 13 of the 14 responder cases that involved physical escorting, parents and school staff reported that the adolescent's resistive responses decreased by the second week of the intervention. It seems that consistency in physical escorting in the face of resistive responses helps ensure that avoidance of school gives way to regular school attendance. The strength of parents' resolve is likely associated with their consistency in physical escorting, and their use of appropriate levels of behavioral control may have helped reduce the intensity and persistence of the adolescent's resistive responses (Smetana, 2017).

Verbal prompts to elicit attendance seem to be sufficient in some cases. Half of the 28 treatment response cases involved a return to full-time school attendance via verbal prompts. That is, parents and school staff firmly stated that they would escort the adolescent to school if they refused to attend of their own accord. In one of these cases the adolescent had been absent from school for 360 school days (one-and-a-half school years).

There was no significant difference between the group of adolescents who responded to verbal prompting and those who responded to physical escorting with respect to the average number of days absent prior to the intervention. It thus

seems that the amount of absenteeism prior to intervention is unlikely to be a reliable indicator of the likely outcome of verbal prompting vis-à-vis physical escorting, at least in cases of adolescent SR characterized by the adolescent's unwillingness to participate in therapy sessions. At the same time, it is the clinical impression of the first author (NM) that the 14 cases that responded to verbal prompting shared two features. First, there was no parent-child role reversal. The parents of these adolescents were not observed to have difficulty managing their child's behavior on a daily basis and they did not bow to unreasonable demands from the child (e.g., purchasing expensive gaming software which the adolescent demanded in return for school attendance). The absence of parent-child role reversal is likely to benefit rapid school return because parents often need to adopt a firm attitude toward their child when enforcing school attendance. The second feature observed in cases responding to verbal prompting is that during the support meeting the parents indicated they have good communication with their child. When adolescents are helped to communicate their distress, and when they feel understood, this may reduce their overall level of distress and increase their willingness to attend school (Heyne and Sauter, 2013).

Of the nine non-response cases in the intervention group, four temporarily returned to school following the intervention, but there was relapse to SR within 3 months. The parents decided not to re-apply pressure for school attendance based on the advice of others (e.g., psychiatrists, teachers, friends). The other five non-response cases involved the parents discontinuing intervention following efforts to escort the adolescent to school, because the adolescent's resistive responses were greater than expected (e.g., fleeing from home or school; temper tantrums during the escorting process). It was particularly difficult for these parents to respond to their child's leaving school after classes had started, due to their own work schedules.

There were two commonalities across the nine non-response cases in the intervention group. First, parent-child role reversal was evident. The adolescents in this group regularly made high demands in exchange for school attendance. Moreover, it seemed to be the mothers in these families who accommodated the adolescents' demands. Parent-child role reversal may have rendered the parents less effectual in managing the escorting process. A second and related commonality among most non-response cases was the lack of paternal authority. This has been identified in prior studies of SR, whereby fathers were described as under-involved (Baideme et al., 1979; Blagg, 1987), not holding a responsible parental role (Hersov, 1977), not showing a firm attitude toward the child's school attendance (Kennedy, 1965; Aida, 1978), and needing to become more involved in the escorting process (Ishikawa, 2007; Maeda et al., 2010, 2012b; Maeda, 2012). It has been suggested that fathers are likely to manage adolescents' resistive responses physically and firmly during the process of escorting to school, which may help modify parent-child role reversal between mothers and adolescents (Ishikawa, 2002). At the school, intensive resistive responses from adolescents may necessitate the involvement of more school staff to help parents with escorting (Maeda,

2016), especially when fathers do not actively participate. The involvement of school staff depends on school policy about staff escorting a student into school, which is likely to vary across schools and across cultures.

Cultural Influences on the Use of a Rapid School Return Approach

The cases presented in this study are not unique to Japan. For example, Blagg (1987) reported on British adolescents who refused school and benefited from a rapid return to school. Those cases were similar to the cases reported in the current study in the following ways: (a) refusal to go to school subsequent to experiences such as school transfer, physical illness, and friendship problems; (b) absence of physical disorder; (c) resistive responses during the escorting process; and (d) lack of paternal authority. One of Blagg's cases involved the treatment of an adolescent male whose mother was overprotective and whose father was uninvolved in managing the SR. The parents had initially chosen for home tuition, which seemed to reinforce the adolescent's SR. Thereafter, the therapist physically escorted the resistive adolescent to school for 2 weeks because the parents seemed incapable of this. The adolescent resumed attendance and was still attending school regularly 1 year later. In the current study, it was sometimes necessary for school staff to help the parents physically escort the adolescent to school. This was decided jointly between the parents and school staff during the initial support meeting, when parents spoke about the difficulty they previously encountered when escorting their child to school.

A difference between Blagg's (1987) intervention and the rapid school return approach reported in the current study is that Blagg used warnings about legal action (e.g., the family being taken to court). The threat of legal action may have been an important factor in the youths' return to school. In Japan it is virtually impossible for school authorities to impose legal sanctions against parents who do not get their children to school (Shinohara, 2008). Although it is permissible by law, the law is rarely applied. Furthermore, local educational boards tend not to put pressure upon parents to pressure their child to attend school (Shinohara, 2008), which may be a result of media coverage about not applying pressure (Kawai and Sakurai, 2003).

A peculiarity of the Japanese education system is that students in compulsory schools can receive automatic promotion to the next year level and a diploma at graduation age regardless of school attendance and individual academic achievement (Maeda and Hatada, 2019). At an individual and family level, this can discourage youth displaying SR and their parents from pursuing regular school attendance. At a community level, it can make it difficult for education and mental health professionals in Japan to value and implement the school-based rapid school return approach.

Clearly, cultural influences will impact the type of SR interventions delivered in different countries, and these influences will also change over time. It is incumbent upon us as education and mental health professionals to discern and deliver culturally and ethically responsive interventions, moving

beyond historical and traditional barriers to how we work (Gallardo et al., 2009).

Indications and Contra-Indications for Rapid School Return

It has long been acknowledged that behavioral intervention involving forced school return can be quite stressful for youth and parents (Blagg and Yule, 1984; Gullone and King, 1991). This may explain, in part, why there have been few examples of behaviorally-oriented rapid school return since the 1990s, the period in which youth-focused CBT for SR became more prominent. Literature published in the 2000s has focused, instead, on the indications and contra-indications associated with rapid return to school for youth displaying SR.

Kearney (2002a) suggested that immediate return to full-time attendance is not preferable when youth have high levels of anxiety and long histories of SR. Wimmer (2003) suggested that the rapid approach be utilized with great caution because of the extreme stress that can be experienced by the people involved. Kearney (2003) advised that rapid school return be stopped when youth become overanxious or parents cannot tolerate it. At the same time, it was pointed out that stopping rapid school return midway reinforces the child's resolve to refuse school.

In a 2004 review of CBT for youth anxiety and depressive disorders, Compton et al. discussed extinction in relation to school phobia. It was argued that "unilateral extinction strategies, such as when a parent returns the school-phobic child to school by force, have significant disadvantages relative to consensual child involvement" (p. 947). Failure to help the young person internalize a strategy for coping with current and future anxiety-provoking situations was held to be a key disadvantage. Another disadvantage reported by Compton et al. is the inability to address symptoms that parents and teachers may not be aware of.

In 2007 Kearney and Albano advocated the following conditions for the use of enforced school attendance: "(a) a child refusing school only for attention and without any significant distress or anxiety; (b) parents who are willing to take a child to school and school officials who are willing to meet the child at the door of the school building and escort her to class; (c) presence of two parents or one parent and another adult who can take the child to school; (d) a child who understands what will happen if she refuses school; (e) a child currently missing most school days; (f) a child under age 11 years" (p. 175). With respect to the first point, education and mental health professionals can use the School Refusal Assessment Scale—Revised (Kearney, 2002b) to assess the prominence of attention-seeking behavior, together with other instruments to assess distress and anxiety (see Ingul et al., 2019). Parsons (2009) also advised that the rapid school return approach only be utilized by specifically trained school counselors.

The youth's developmental level, often estimated via age, is an important consideration for the use of rapid school return. As noted, Kearney and Albano (2007) suggested that rapid school return only be used with youth under 11 years of age. In the current study the approach was used with 39

youth older than 12 years. Almost three quarters of these cases returned to regular attendance at school, calling into question the recommendation of Kearney and Albano. Kennedy's (1965) flooding-based approach was also applied successfully with a group of adolescents ($n = 13$). Despite this, Kennedy did not use the rapid school return approach for Type II SR, characterized in part by being in the "upper grades." In effect, Kennedy indirectly suggested that the rapid school return approach not be used with older youth displaying SR.

Parent-related factors also warrant consideration when deciding whether to use a rapid school return approach. First, do parents experience psychological difficulties which may impact their role in managing their child's school attendance? Research on exposure-based CBT for youth anxiety suggests that when parents have psychological problems some children may benefit less from parental involvement in treatment (Berman et al., 2000). Psychopathology is frequently observed in the parents of youth displaying SR (Heyne et al., 2015) which may maintain SR if the parents' own anxiety or depression interferes with their capacity to support the child's return to regular schooling. For example, parents may be less effective in their use of instructions and less attentive to any progress made by the young person (Heyne et al., 2004). A second parent-related factor to consider is whether parents are capable of remaining calm and avoiding verbally and physically aggressive behavior when enforcing school attendance. Hostility or conflict between parents and youth needs to be addressed before or during intervention for SR (Kearney and Silverman, 1995), and certainly before intervention involving rapid school return. Close relatives may be called upon if parents lack control or are extremely anxious (Blagg and Yule, 1984) but also if they lack time or the commitment to block their child's avoidance behavior (e.g., Hargrett and Webster, 1996). Third, do the parents believe they are able to enforce school attendance? Even if parents are able to regulate their emotions, uncertainty about whether they are able to implement the rapid return approach would likely impede the procedure. Parent self-efficacy can be measured via the Self-Efficacy Questionnaire for Responding to School Attendance Problems (Heyne et al., 2007).

The few accounts of rapid school return that have been reported since the 1990s emerge from Japan (e.g., Sonoda and Takayama, 2006; Ishikawa, 2007; Maeda, 2011, 2012, 2016; Maeda et al., 2012b). Contra-indications reported in these studies relate to the presence of physical or mental disorders for youth and the experience of bullying at school. The main indication for considering rapid school return was the youth's unwillingness to participate in therapy sessions.

In the absence of robust empirically-derived guidelines, education and mental health professionals must weigh up the relative merits of a flooding approach versus a part-time increase in school attendance. According to Yule et al. (1980), each approach can work in particular cases and "the problem is to know before-hand which approach to try first with which cases" (p. 276). King and Ollendick (1989) reviewed desensitization-based gradual school return and flooding-based rapid school return as behavioral interventions for SR. They argued that rapid school return would help minimize secondary gain (e.g., the child

enjoys watching television when not at school) while gradual return would be required for school refusers with severe anxiety who are uncomfortable with the rapid approach. Indeed, the severe and chronic cases of SR, conceptualized as Tier 3 cases in the Kearney and Graczyk (2014) response-to-intervention model for absenteeism, likely warrant more intensive assessment and graduated school return, relative to Tier 2 cases of emerging SR. However, if it is not possible for the therapist to meet with the young person to conduct assessment and treatment, a parent-focused flooding-based approach may need to be considered, in view of the negative outcomes associated with continued absence from school.

Summarizing the various considerations about this approach, rapid school return may be indicated when: (a) youth cannot be encouraged to participate in treatment (Maeda, 2016); (b) they do not have genuine physical problems (Blagg and Yule, 1984) or serious mental health problems (Rodriguez et al., 1959); (c) they are not overly anxious (King and Ollendick, 1989; Kearney, 2002a; Kearney and Albano, 2007) and have not experienced bullying at school (Ishikawa, 2007; Maeda, 2011, 2012) (d) the young person is enrolled at an appropriate school (Blagg and Yule, 1984); (e) parents and school staff agree on the use of rapid return and school staff can make arrangements to help the young person settle in at school (Blagg and Yule, 1984; Kearney and Albano, 2007), such as opportunities to meet with preferred teachers without this becoming an avoidance of class time (Peterman et al., 2015); (f) two parents or other appropriate support people can be involved in escorting (Blagg and Yule, 1984; Kearney and Albano, 2007); (g) parents receive detailed advice about how to respond to the young person's resistive behavior (Blagg and Yule, 1984); and (h) school staff receive adequate training in the use of the approach (Parsons, 2009). Rapid return is contra-indicated when parents experience difficulties (e.g., anger management; depression; low self-efficacy) and there are no substitute support people available to escort the young person to school.

Extrapolating from Compton et al. (2004), once the young person is attending school again, arrangements should be made to assess his or her social-emotional functioning and build coping skills. As an example, Maeda (2012) reported that seven sessions of social skills training were offered to a young person who resumed school attendance following implementation of the school-based rapid school return approach. Similarly, family dynamics should not be ignored simply because a decision is made to employ rapid school return under appropriate conditions. Once youth are attending school again, attention can shift to the parents' role in granting appropriate autonomy to their adolescent child. For example, in a treatment for anorexia nervosa in adolescents, parents are initially responsible for supervising aspects of the intervention (e.g., eating behavior) while in later phases parents reduce their authority and "take a step back" (Le Grange et al., 2005). Parents are then encouraged to engage in discussions with the adolescent about the adolescent increasing personal autonomy and the parent decreasing authority in areas of the adolescent's life.

Limitations and Further Research

The current study has limitations. First, no assessment was undertaken with the adolescents because of their refusal to attend sessions with the counselor. Thus, there was no pre- or post-intervention data on the adolescents' mental health status (except pre-intervention information from parents and teachers about the absence of diagnosed mental disorders) or severity of SR (except for data on absenteeism). Thus, the short- and long-term social-emotional benefits of school return are unknown. Second, this study was an uncontrolled case series. Randomized controlled trials need to be conducted to establish the effectiveness of the rapid school return approach. A wait-list control condition might be judged unethical by school principals in Japanese compulsory schools, necessitating a comparison with treatment as usual and matching youth on key variables (e.g., age, gender, length of SR). Controlled case studies present another option, incorporating regular measurement of the adolescent's social-emotional functioning. Factors that potentially moderate the outcome of rapid school return should be measured in future trials (e.g., family functioning; parenting styles and dimensions; youth temperament) along with treatment acceptability for youth, parents, and school staff.

CONCLUSION

The current study explored the effectiveness of a school-based rapid school return approach for adolescents displaying SR. The approach is implemented via the school counselor with parents and school staff; no individual sessions are conducted with the young person. The case series presented here preliminarily suggests that positive results can be achieved for a sizable group of adolescents who display SR and are unwilling to come to individual therapy sessions. The results also suggest that waiting for the adolescent's spontaneous school attendance may best be avoided. The extent to which adolescents engage in resistive responses when being escorted to school may be associated

with parenting factors such as parent-child role reversal and diminished paternal authority. These factors, as well as the other indications and contra-indications presented here, should be carefully assessed during the support meeting with parents, prior to implementing rapid school return. Robust evidence for the effectiveness of the rapid school return approach with adolescents is yet to be garnered. The conditions needed to ensure optimal short-term and long-term outcomes for adolescents also need to be investigated.

DATA AVAILABILITY STATEMENT

Requests to access the datasets should be directed to Naoki Maeda: naoki225@phoenix.ac.jp

ETHICS STATEMENT

Ethical review and approval was not required for the study in accordance with local legislation and institutional requirements. Written informed consent for participation was not provided by the participants' legal guardians/next of kin because this first author conducted the intervention described in this manuscript during the course of his work as school counselor. The intervention was not conducted in the context of a research project. The school principals and parents gave verbal consent for the intervention to be employed. Parents not consenting to the intervention are those referenced as the non-intervention group.

AUTHOR CONTRIBUTIONS

NM designed the study and was responsible for the intervention, data collection, and data analysis. DH contributed to the conceptualization and writing of the manuscript, with major contributions to the Introduction and Discussion. NM and DH wrote sections of the manuscript, contributed to manuscript revision, and read and approved the submitted version.

REFERENCES

- Aida, M. (1978). Futoukou ni taisuru chichioya ni yoru kyouseihou [One approach to school refusal: flooding method by the client's father]. *Jpn. J. Psychother.* 4, 57–63.
- Baideme, S. M., Kern, R. M., and Taffel-Cohen, S. (1979). The use of Adlerian family therapy in a case of school phobia. *J. Individ. Psychol.* 35, 58–69.
- Berez, J. (1969). "Phobia of childhood: etiology and treatment," in *Annual Progress in Child Psychiatry and Child Development*, eds S. Chess and A. Thomas (New York, NY: Brunner; Mazel), 558–601.
- Berg, I. (1985). Management of school refusal. *Arch. Dis. Child.* 60, 486–488. doi: 10.1136/ad.60.5.486
- Berg, I. (1997). School refusal and truancy. *Arch. Dis. Child.* 76, 90–91. doi: 10.1136/ad.76.2.90
- Berg, I. (2002). "School avoidance, school phobia, and truancy," in *Child and Adolescent Psychiatry: A Comprehensive Textbook, 3rd Edn*, ed M. Lewis (Sydney, NSW: Lippincott Williams & Wilkins), 1260–1266.
- Berg, I., Nichols, K., and Pritchard, C. (1969). School phobia: its classification and relationship to dependency. *J. Child Psychol. Psychiatry* 10, 123–141. doi: 10.1192/bjp.116.533.407
- Berman, S. J., Weems, C. F., Silverman, W. K., and Kurtines, W. M. (2000). Predictors of outcome in exposure-based cognitive and behavioral treatments for phobic and anxiety disorders in children. *Behav. Ther.* 31, 713–731. doi: 10.1016/S0005-7894(00)80040-4
- Bernstein, G. A., Hektner, J. M., Borchardt, C., and McMillan, M. H. (2001). Treatment of school refusal: one-year follow-up. *J. Am. Acad. Child Adolesc. Psychiatry* 40, 206–213. doi: 10.1097/00004583-200102000-00015
- Blagg, N. R. (1977). A detailed strategy for the rapid treatment of school phobics. *Bull. Br. Assoc. Behav. Psychother.* 5, 70–75. doi: 10.1017/S2041348300015755
- Blagg, N. R. (1987). *School Phobia and Its Treatment*. London: Croom Helm.
- Blagg, N. R., and Yule, W. (1984). The behavioural treatment of school refusal: a comparative study. *Behav. Res. Ther.* 22, 119–127. doi: 10.1016/0005-7967(84)90100-1
- Compton, S. N., March, J. S., Brent, D., Albano, A. M., Weersing, V. R., and Curry, J. (2004). Cognitive-behavioral psychotherapy for anxiety and depressive disorders in children and adolescents: an evidence-based medicine review. *J. Am. Acad. Child Adolesc. Psychiatry* 43, 930–959. doi: 10.1097/01.chi.0000127589.57468.bf

- Elliott, J. G., and Place, M. (2019). Practitioner review: school refusal: developments in conceptualisation and treatment since 2000. *J. Child Psychol. Psychiatry* 60, 4–15. doi: 10.1111/jcpp.12848
- Fremont, W. P. (2003). School refusal in children and adolescents. *Am. Fam. Physician* 68, 1555–1561.
- Fujita, H. (2009). Sukuurukaunseringu jissen ni oite kojinyouhou to kazokuryouhou wo tsunagu mono [An investigative approach of family therapy and individual therapy in school counseling practice: a new perspective of empathy, intervention and change]. *J. Jpn. Clin. Psychol.* 27, 385–396.
- Fukaya, K. (1983). “Kaunseringu no tachiba kara [From counseling view point],” in *Toukoukyohi [School Refusal]*, ed K. Uchiyama (Tokyo: Kongou shuppan), 118–132.
- Gallardo, M. E., Johnson, J., Parham, T. A., and Carter, J. A. (2009). Ethics and multiculturalism: advancing cultural and clinical responsiveness. *Profess. Psychol.* 40, 425–435. doi: 10.1037/a0016871
- Glaser, K. (1959). Problems in school attendance: school phobia and related conditions. *Pediatrics* 23, 371–383.
- Gullone, E., and King, N. J. (1991). Acceptability of alternative treatments for school refusal: evaluations by students, caregivers, and professionals. *Br. J. Educ. Psychol.* 61, 346–354. doi: 10.1111/j.2044-8279.1991.tb00991.x
- Hargett, M. Q., and Webster, R. E. (1996). Treatment integrity and acceptability with families: a case study of a child with school refusal. *Psychol. Schools* 33, 319–324. doi: 10.1002/(SICI)1520-6807(199610)33:4<319::AID-PITS6>3.0.CO;2-H
- Herbert, M. (2004). *School Refusal in Adolescence*. Oxford: Australian Council for Educational Research.
- Hersen, M. (1971). The behavioral treatment of school phobia: current techniques. *J. Nerv. Ment. Dis.* 153, 99–107. doi: 10.1097/00005053-197108000-00004
- Hersov, L. (1972). School refusal. *Br. Med. J.* 3, 102–104. doi: 10.1136/bmj.3.5818.102
- Hersov, L. A. (1977). “School refusal,” in *Child Psychiatry: Modern Approaches*, eds M. Rutter and L. A. Hersov (Oxford: Blackwell), 455–486.
- Heyne, D. (2006). “School refusal,” in *Practitioner’s Guide to Evidence-Based Psychotherapy*, eds J. E. Fisher and W. T. O’Donohue (New York, NY: Springer), 599–618.
- Heyne, D., Gren-Landell, M., Melvin, G., and Gentle-Genitty, C. (2019). Differentiation between school attendance problems: why and how? *Cogn. Behav. Pract.* 26, 8–34. doi: 10.1016/j.cbpra.2018.03.006
- Heyne, D., King, N., Tonge, B., Rollings, S., Young, D., Pritchard, M., et al. (2002). Evaluation of child therapy and caregiver training in the treatment of school refusal. *J. Am. Acad. Child Adolesc. Psychiatry* 41, 687–695. doi: 10.1097/00004583-200206000-00008
- Heyne, D., and King, N. J. (2004). “Treatment of school refusal,” in *Handbook of Interventions That Work With Children and Adolescents: Prevention and Treatment*, eds P. M. Barrett and T. H. Ollendick (Chichester: John Wiley & Sons, Ltd.), 243–272. doi: 10.1002/9780470753385.ch11
- Heyne, D., King, N. J., and Ollendick, T. H. (2004). “School refusal,” in *School Refusal: Cognitive Behavior Therapy for Children and Families*, ed P. Graham (Cambridge, UK: Cambridge University Press), 320–341. doi: 10.1017/CBO9780511543845.019
- Heyne, D., Maric, M., and Westenberg, P. M. (2007). *Self-Efficacy Questionnaire for Responding to School Attendance Problems*. Unpublished measure. Leiden: Leiden University.
- Heyne, D., and Rollings, S. (2002). *School Refusal, Parents, Adolescent and Child Training Skills 2*. Oxford: BPS Blackwell.
- Heyne, D., and Sauter, F. M. (2013). “School refusal,” in *The Wiley-Blackwell Handbook of the Treatment of Childhood and Adolescent Anxiety*, eds C. A. Essau and T. H. Ollendick (Chichester: Wiley), 471–517. doi: 10.1002/9781118315088.ch21
- Heyne, D., Sauter, F. M., Ollendick, T. H., Van Widenfelt, B. M., and Westenberg, P. M. (2014). Developmentally sensitive cognitive behavioral therapy for adolescent school refusal: rationale and case illustration. *Clin. Child Fam. Psychol. Rev.* 17, 191–215. doi: 10.1007/s10567-013-0160-0
- Heyne, D., Sauter, F. M., Van Widenfelt, B. M., Vermeiren, R., and Westenberg, P. M. (2011). School refusal and anxiety in adolescence: non-randomized trial of a developmentally sensitive cognitive behavioral therapy. *J. Anxiety Disord.* 25, 870–878. doi: 10.1016/j.janxdis.2011.04.006
- Heyne, D. A., Sauter, F. M., and Maynard, B. R. (2015). “Moderators and mediators of treatments for youth with school refusal or truancy,” in *Moderators and Mediators of Youth Treatment Outcomes*, eds M. Maric, P. J. M. Prins, and T. H. Ollendick (Oxford: Oxford University Press), 230–266. doi: 10.1093/med:psych/9780199360345.003.0010
- Honjo, S. (1990). Toukoukyohi kateinaibouryoku no byouzenseikaku to chiryou kankei [Premorbid character and therapeutic relation of the young patients who refuse to go to school or do violence to their family members]. *Jpn. J. Psychiatr. Treat.* 5, 1143–1153.
- Ingul, J. M., Havik, T., and Heyne, D. (2019). Emerging school refusal: a school-based framework for identifying early signs and risk factors. *Cogn. Behav. Pract.* 26, 46–62. doi: 10.1016/j.cbpra.2018.03.005
- Ishikawa, R. (2002). *Futoukou to Chichioya no Yakuwari [School Refusal and the Role of the Father]*. Tokyo: Seikyusha.
- Ishikawa, R. (2007). *Futoukou Kara Dasshutsu Suru Houhou [The Way Out of School Refusal]*. Tokyo: Seikyusha.
- Kawai, I. (2003). *Futoukou Jidouseito no Gakkoufukkisen: Koudouronteki Gensoku to Gihou [Support for School Refusers to Return to School: Behavioral Theory and Technique]*. Yasuda Josidaigaku Daigakuin Kaishu Jushunen Kinen Ronbunshu [Bulletin of the 10th Anniversary of the Graduate School of Yasuda Women’s University], 145–152.
- Kawai, I., and Sakurai, K. (2003). *Futoukou [School Refusal]*. Kyoto: Nakanishiya.
- Kearney, C. A. (2002a). Case study of the assessment and treatment of a youth with multifunction school refusal behavior. *Clin. Case Stud.* 1, 67–80. doi: 10.1177/1534650102001001006
- Kearney, C. A. (2002b). Identifying the function of school refusal behavior: a revision of the School Refusal Assessment Scale. *J. Psychopathol. Behav. Assess.* 24, 235–245. doi: 10.1037/10426-001
- Kearney, C. A. (2003). *School Refusal Behavior in Youth: A Functional Approach to Assessment and Treatment*. Washington, DC: American Psychological Association.
- Kearney, C. A., and Albano, A. M. (2007). *When Children Refuse School: A Cognitive-Behavioral Therapy Approach*. New York, NY: Oxford. doi: 10.1093/med:psych/9780195308297.001.0001
- Kearney, C. A., and Bates, M. (2005). Addressing school refusal behavior: suggestion for frontline professionals. *Child. Schools* 27, 207–216. doi: 10.1093/cs/27.4.207
- Kearney, C. A., and Bensaheb, A. (2006). School absenteeism and school refusal behavior: a review and suggestions for school-based health professionals. *J. Sch. Health* 76, 3–7. doi: 10.1111/j.1746-1561.2006.00060.x
- Kearney, C. A., and Graczyk, P. (2014). A response to intervention model to promote school attendance and decrease school absenteeism. *Child Youth Care Forum* 43, 1–25. doi: 10.1007/s10566-013-9222-1
- Kearney, C. A., and Silverman, W. K. (1995). Family environment of youngsters with school refusal behavior: a synopsis with implications for assessment and treatment. *Am. J. Fam. Ther.* 23, 59–72. doi: 10.1080/01926189508251336
- Kennedy, W. A. (1965). School phobia: rapid treatment of fifty cases. *J. Abnorm. Psychol.* 70, 285–289. doi: 10.1037/h0022440
- King, N. J., and Ollendick, T. H. (1989). School refusal: graduated and rapid behavioural treatment strategies. *Austr. N. Z. J. Psychiatry* 23, 213–223.
- King, N. J., Tonge, B., Heyne, D., Pritchard, M., Rollings, S., Yong, D., et al. (1998). Cognitive-behavioral treatment of school-refusing children: a controlled evaluation. *J. Am. Acad. Child Adolesc. Psychiatry* 37, 395–403. doi: 10.1097/00004583-199804000-00017
- Last, C. G., and Francis, G. (1988). “School phobia,” in *Advances in Clinical Child Psychology*, eds B. B. Lahey and A. E. Kazdin (New York, NY: Plenum Press), 193–222.
- Last, C. G., Hansen, C., and Franco, N. (1998). Cognitive-behavioral treatment of school phobia. *J. Am. Acad. Child Adolesc. Psychiatry* 37, 404–411. doi: 10.1097/00004583-199804000-00018
- Le Grange, D., Binford, R., and Loeb, K. L. (2005). Manualized family-based treatment for anorexia nervosa: a case series. *J. Am. Acad. Child Adolesc. Psychiatry* 44, 41–46. doi: 10.1097/01.chi.0000145373.68863.85
- Leventhal, T., Weinberger, G., Stander, R. J., and Stearns, R. P. (1967). Therapeutic strategies with school phobics. *Am. J. Orthopsychiatry* 37, 64–70. doi: 10.1111/j.1939-0025.1967.tb01068.x

- Maeda, N. (2011). Koudouronteki shitenkaramita futoukoutaiou no genjou to kadai oyobi koudouronteki apurouchi no kouka: gakkougenba ni okeru futoukouji no hogosha no shien wo tooshite [Present situations and issues with treatment of school refusal behaviour, and the effect of school-based behavioural approach: through support for parents with school refusal child]. *Prog. Soc. Welf. Res.* 6, 63–73.
- Maeda, N. (2012). The effects of active parental intervention on school refusal behavior. *Prog. Soc. Welf. Res.* 7, 15–25.
- Maeda, N. (2016). School-based behavioural consultation for school-refusal behaviour. *Int. J. Psychol. Stud.* 8, 40–52. doi: 10.5539/ijps.v8n1p40
- Maeda, N., and Hatada, S. (2019). The school attendance problem in Japanese compulsory education: the case of a public junior high school. *Eur. J. Educ. Psychol.* 12, 63–75. doi: 10.30552/ejep.v12i1.241
- Maeda, N., Hatada, S., Sonoda, J., and Takayama, I. (2012a). School-based intensive exposure therapy for school refusal behavior. *Clin. Case Stud.* 11, 299–311. doi: 10.1177/1534650112457456
- Maeda, N., Sonoda, J., and Takayama, I. (2010). Futoukou shien ni okeru chichioya no yakuwari [The role of the father in a behavioural approach to school refusal behavior]. *J. Kyushu Univ. Health and Welfare*, 11, 23–28.
- Maeda, N., Takayama, I., and Sonoda, J. (2012b). Gakkougenba ni okeru futoukouji heno koudouronteki apurouchi: hogosha heno shinrikyouiku oyobi chichioya no kainyuu ga koutateki ni sayou shita chuugakusei no shourei wo tooshite [School-based behavioural approach to school refusal behaviour: a case study of a junior high school student who returned to classroom with behavioural psycho-education and active paternal intervention]. *Jpn. Soc. Psychosom. Med.* 52, 141–147. doi: 10.15064/jjpm.52.2_141
- Maynard, B. R., Heyne, D., Brendel, K. E., Bulanda, J. J., Thompson, A. M., and Pigott, T. D. (2018). Treatment for school refusal among children and adolescents: a systematic review and meta-analysis. *Res. Soc. Work Pract.* 28, 56–67. doi: 10.1177/1049731515598619
- Meguro, N. (2009). Gakkoukyouikurinshou ni okeru kyoudou no kouka ni kan suru shitsuteki kenkyuu [Qualitative research on effect of collaboration in school counseling: an introduction of support model by analysis of school refusal case]. *Hyogo Univ. J.* 14, 181–196.
- Ministry of Education, Culture, Sports, Science, and Technology-Japan (MEXT) (2017). *Heisei 29 Nenndo Jidou Seito no Mondaikoudou Futoukoutou Seito Sidoujou no Shomondai ni Kansuru Chousa Kekka ni Tsuite*. [Report on school basic survey in 2017]. Available online at: http://www.mext.go.jp/b_menu/houdou/30/10/1410392.htm (retrieved June 23, 2019).
- Ministry of Education, Culture, Sports, Science, and Technology-Japan (MEXT) (2003). *Futoukou Heno Taiou ni Tsuite [Approach to School Attendance Problem]*. Available online at: http://www.mext.go.jp/a_menu/shotou/futoukou/main.htm (retrieved June 23, 2019).
- Nakagawa, H. (1998). Futoukou no kenkyuu: kyoushi oya no nozomashii shien no arikata [Non attendant study: offering effective support from teachers and parents]. *Hokkaido J. Spec. Needs Educ. Emotion. Dev. Disturb. Pers.* 17, 217–224.
- Nishida, A., Sugiyama, S., Aoki, S., and Kuroda, S. (2004). Characteristics and outcome of school refusal in Hiroshima, Japan: proposals for network therapy. *Acta Med. Okayama* 58, 241–249. doi: 10.18926/AMO/32103
- Okuyama, M., Okada, M., Kuribayashi, M., and Kaneko, S. (1999). Factors responsible for the prolongation of school refusal. *Psychiatry Clin. Neurosci.* 53, 461–469. doi: 10.1046/j.1440-1819.1999.00585.x
- Ollendick, T. H., and King, N. J. (1999). Child behavioral assessment and cognitive-behavioral intervention in schools. *Psychol. Sch.* 36, 427–436. doi: 10.1002/(SICI)1520-6807(199909)36:5<427::AID-PITS6>3.0.CO;2-H
- Parsons, R. D. (2009). *Thinking and Acting Like a Behavioral School Counseling*. Thousand Oaks, CA: Corwin.
- Peterman, J. S., Read, K. L., Wei, C., and Kendall, P. C. (2015). The art of exposure: putting science into practice. *Cogn. Behav. Pract.* 22, 379–392. doi: 10.1016/j.cbpra.2014.02.003
- Rodriguez, A., Rodriguez, M., and Eisenberg, L. (1959). The outcome of school phobia: a follow-up study based on 41 cases. *Am. J. Psychiatry* 116, 540–544. doi: 10.1176/ajp.116.6.540
- Saito, T. (2007). Futoukou hikikomori no mondai to taounitsuite [The issue of school refusal and social withdrawal and their support]. *Gakkoukyouiku soudan [Educ. Counsel.]* 21, 12–37.
- Sewell, J. (2008). School refusal. *Aust. Fam. Physician* 37, 406–408.
- Shinohara, K. (2008). “Seitoshidou to hou [Student guidance and laws],” *Gakkou No Tame No Hougaku [Laws for School: Toward the Development of Independent and Cooperative School]*, ed K. Shinohara (Kyoto: Mineruba shobou), 128–154.
- Smetana, J. G. (2017). Current research on parenting styles, dimensions, and beliefs. *Curr. Opin. Psychol.* 15, 19–25. doi: 10.1016/j.copsyc.2017.02.012
- Sonoda, J. (1971). Gakkou kyounfushou ni kansuru rinshoushinrigakuteki kenkyuu: koudouriron kara no apurouchi [Clinicopsychological studies in school phobia: with special reference to examination from the standpoint of behavior theory]. *Med. J. Kagoshima Univ.* 23, 581–619.
- Sonoda, J., Hashimoto, K., Ishibashi, C., and Kamohara, Y. (2008). Futoukoushien no gendaiteki kadai: koudoukagaku no tachiba kara [Contemporary subjects to support of school non-attendance: from viewpoints of behavioral science]. *J. Kibi Int. Univ. Res. Instit. Clin. Psychol.* 5, 1–22.
- Sonoda, J., and Takayama, I. (2006). Futoukou ni taisuru jinsoku saitoukouhou [Early rapid return to school of non-attendance at school]. *J. Kibi Int. Univ. Res. Instit. Clin. Psychol.* 3, 1–7.
- Tabata, O. (1980). “Kaunseringu ryoho [Counseling],” in *School Refusal*, eds T. Takuma and H. Inamura (Tokyo: Yuhikaku Sensho), 171–186.
- Terada, M. (2015). Futoukou no kodomo no rikai to soukitaisho II: gakkou ni okeru taisho no wakugumi [The Treatment of non-attendance children (11): the framework of the treatment in school]. *J. Tokai Gakuin Univ.* 9, 101–118.
- Warnecke, R. (1964). School phobia and its treatment. *Br. J. Med. Psychol.* 37, 71–79. doi: 10.1111/j.2044-8341.1964.tb01308.x
- Wimmer, M. B. (2003). *School Refusal and Intervention Within School Setting*. Bethesda, MD: National Association of School Psychologist.
- Yule, W., Hersov, L., and Treseder, J. (1980). “Behavioural treatments of school refusal,” in *Out of School*, eds L. Hersov and I. Berg (Chichester: John Wiley & Sons, Ltd.), 267–301.

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2019 Maeda and Heyne. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



Migrant Parents of Adolescents With School Refusal: A Qualitative Study of Parental Distress and Cultural Barriers in Access to Care

Lucie Rosenthal^{1,2*}, Marie Rose Moro^{3,4,5} and Laelia Benoit^{3,4,5}

¹ Department of Child and Adolescent Psychiatry, Toulouse University Hospital (CHU de Toulouse), Toulouse, France,

² Department of Child and Adolescent Psychiatry, Centre Hospitalier Spécialisé Pierre-Jamet, Fondation Bon-Sauveur d'Alby, Albi, France, ³ Maison des Adolescents - Maison de Solenn, Hôpital Cochin, APHP, Paris, France, ⁴ Dept of Child and Adolescent Psychiatry, University of Paris, PCPP, Boulogne-Billancourt, France, ⁵ Center for Research in Epidemiology and Population Health (CESP), Paris-Sud and UVSQ Medical Schools, French National Institute of Health and Medical Research (Inserm), Villejuif, France

OPEN ACCESS

Edited by:

Christopher Kearney,
University of Nevada, Las Vegas,
United States

Reviewed by:

Pooja Sawrikar,
Griffith University, Australia
Ilán Katz,
University of New
South Wales, Australia

*Correspondence:

Lucie Rosenthal
lucie.rosenthal@gmail.com

Specialty section:

This article was submitted to
Child and Adolescent Psychiatry,
a section of the journal
Frontiers in Psychiatry

Received: 30 September 2019

Accepted: 28 November 2019

Published: 09 January 2020

Citation:

Rosenthal L, Moro MR and Benoit L
(2020) Migrant Parents of Adolescents
With School Refusal: A Qualitative
Study of Parental Distress and Cultural
Barriers in Access to Care.
Front. Psychiatry 10:942.
doi: 10.3389/fpsy.2019.00942

Introduction: School refusal is an important problem in adolescent psychiatry. However, little is known about the experience of school refusal among minority youth (migrants and minority ethnic groups). This study assesses how parents of various cultural backgrounds experience their adolescents' school refusal.

Method: This qualitative study is based on interviews of 11 parents of teenagers diagnosed with school refusal at three adolescent outpatient mental health units in Paris and its suburbs. Interpretative phenomenological analysis was used for the thematic investigation.

Results: The analysis found four themes: (i) confronting school and school refusal distresses parental representations; (ii) school refusal as a failure of the family's obligation to succeed after migration; (iii) representations of school that fluctuate with time since arrival: idealization, followed by mistrust and disappointment in the inequalities, even the racism; (iv) solutions envisioned for school refusal, confronting the healthcare system, stigma, and, again, inequality.

Conclusion: All parents question their parenting choices when their children become school refusers. However, when families belong to minority groups, school refusal calls into question parents' relations with the French school system and their immigration choices. At the same time, the construction of a multicultural identity for children and adolescents in transcultural situations requires them to strike a balance between two worlds, and school refusal endangers this delicate negotiation. Subsequent

misunderstandings can lead clinicians to misdiagnose school refusal as truancy. Clinicians must take the parents' culture and migration history into account to minimize the risk of complete failure of treatment for school refusal and the ensuing inequality of care and opportunity that can result.

Keywords: school refusal, parents' perception, adolescents, transcultural, cross-cultural, migrant families, misdiagnosis, access to care

INTRODUCTION

School refusal affects around 1% of pupils and accounts for 5% of the children seeking psychiatric consultation (1). Berg's consensual (2) definition of school refusal includes (a) reluctance or refusal to attend school, often leading to prolonged absences, by children who (b) stay home during school hours with their parents' knowledge rather than concealing the problem from them, (c) experience emotional distress at the prospect of attending school (somatic complaints, anxiety, and unhappiness), (d) do not show severe antisocial behavior, and (e) whose parents have made reasonable efforts (parental pressure) to secure the child's attendance at school (3, 4).

Adolescence is a sensitive period during which the risks of serious consequences of school refusal are highest (5–7). Without adequate treatment, most youths with school refusal continue to have school attendance problems and emotional distress (8), leading to short- and long-term adverse outcomes such as anxiety disorders (9), depression (10), unemployment, socialization disorders, and a higher risk of developing a psychiatric disorder (11–13). Early intervention is required, and prognosis depends on how much school the child misses (14). School refusal both affects and involves the adolescents' families, and family characteristics are one of the four categories of risk factors for school refusal; the others are the individual, the school, and the community (15, 16).

Historically, family functioning has been considered a central cause of school refusal (14, 17). Researchers focused first on the preponderance of phobic disorders among mothers of girls with school refusal (18), subsequently arguing that parental disorders, family structures, and relationships play a determinative role in the frequency or severity of school refusal: parental lack of self-esteem (19), psychiatric disorders such as anxiety, depression, or stress (16), and marital disagreement or parental inconsistency (20). Nonetheless, some school refusal cases have not appeared to involve any family pathology or dysfunction and show the need for a broader understanding of these issues (5).

Societal changes affect not only adolescents, but also their parents, and the relationships between them. Expectations about the roles of parents continue to expand; they are today supposed to be good teachers as well as good parents (21). Some aspects of modern life favor school refusal, including but not limited to the prolongation of compulsory schooling and increasing school competition (22). French public schools, which were designed to—and did for a long time—function as a social ladder, are now criticized as an outdated system that mostly reproduces

inequalities (23). Although school refusal spares no socioeconomic environment, it is clearly those from lower socioeconomic levels who are in need of guaranteed equal access to care.

Cultural variables play a role in school refusal. Yamada highlighted the role of the school model in current Japanese culture and the pressures, uniformity, and extreme competition it induces. He also pointed out marked societal changes: growing urbanization, a rising divorce rate, the spread of the nuclear family model, and the parallel decline of the traditional extended family structure (24). Kenji Kameguchi, considering school refusal to be a revolution in this Confucian society, has proposed family treatment of school refusal that focuses not on the child but on strengthening the parents' relationship (25).

Some cultural categories of students are overrepresented in a topic that is closely related to school refusal but different: absenteeism. In the United States, national absenteeism statistics (for students aged 9–10 and 13–14 years) find rates of 25%–29% among Native Americans, 21%–24% among Hispanics and African-Americans, 18%–19% among whites, but only 12%–13% among Asians and Pacific Islanders (26). School absenteeism principally concerns children coming from poor families, leading some authors to point out the economic and cultural dimensions of not completing school (27, 28). These dimensions apply to most aspects of school success. Among the 15–16-year olds in the French public school system, 25% have an immigrant background; at the same time, the French school system capacity for integration is mediocre at best (29). In France, these young people not only encounter academic difficulties, but also have a higher risk of grade repetition and dropout ideation than native-born students (30).

In 2008, Christopher Kearney stressed that the “cross-cultural aspects of ... school refusal behavior remain in need of greater exploration and explication” (31). Since then, only a few papers have raised the question of culture and school refusal. According to Benoit, the school refusal of migrant adolescents might reveal their fear of losing their family cultural codes through academic and social achievement (32). Marie-Rose Moro's team at the *Maison des Adolescents* (an outpatient unit dedicated to psychiatric care of adolescents) has been working for years with migrant adolescents and children, as well as with the children of migrants (33). Preadolescence and adolescence are especially vulnerable periods for children with this background (34). Moro links this vulnerability to the gap experienced by migrant children between their “inside world, linked to the affectivity and cultural universe of parents” and their “outside world, of school and media” governed by the norms of the host

country (35). For children of migrants, schooling also means becoming part of French institutions, learning their language and their codes (36).

During adolescence, as part of the process of identity construction, teens come to question their vision of their parents as strong and reliable. In migrant families, this questioning may be increased because the culture codes of the parents are not relayed by the host country (37). Adolescent empowerment and peer group affiliations cause these teens to call into question these two worlds and the balance between them; migrants' adolescent children must negotiate their identities carefully (38, 39). The not infrequent weakening of these families by events causing migration can impede this negotiation and leave the adolescents caught in a conflict of loyalty between these two worlds, in which the school may take the symbolic place of the *outside world*, the host country. These cross-cultural issues can lead to various negative school events, such as failing examinations or school refusal (40).

Few studies on school refusal have focused on parents who are immigrants to the country they live in, and none specifically on parents' experiences. Parents are distressed by their children's inability to go to school, their fear of school. This situation calls their parenting ability into question, at a minimum in their own minds. For a youth with school refusal, parents are the primary interlocutors of both school and clinicians. Thus, cultural differences cannot be ignored in the parents' dialogue with health care, social work, and educational institutions.

This study explores the experience of migrant parents of adolescents diagnosed with school refusal. It identifies the common aspects of these experiences, the meanings that these parents attribute to their children's school refusal, and their pathway to care. Improving our understanding of migrant parents' behavior towards their teens and health care institutions will help to provide equal and early access to care for every child with school refusal.

MATERIALS AND METHODS

This qualitative, phenomenological, and inductive study explores parental representations of school refusal in a transcultural context. The central role of empirical results combined with an inductive process enables original findings (41). A phenomenological framework, because of its similarity to the approach used in clinical psychology and psychiatry, appears most appropriate for studying the experience of distress (42).

The choice of this methodology allows us to explore here the subjective experiences of parents in all their diversity, to approach the sensitive issue of their cultural origins, and to understand the relation between these origins and their experience of their children's school issues.

Sampling

The research group initially recruited young people with school refusal; their parents were secondarily recruited for this study. The adolescents were aged 12 to 21 years old, had been diagnosed with school refusal according to Berg's criteria (detailed in the first paragraph of the introduction) and receiving psychiatric care for more than 6 months. They had multicultural origins, defined as having at least one parent from a different culture, that is, different from that of metropolitan France. French overseas departments and territories were considered to be different cultures. This definition was deliberately broad. Sampling was purposive, and the subjects selected were representative of typical cases (43). The contact was made *via* the psychiatrists seeing each youth. They presented the research project, provided the youth with an information sheet for themselves and their parents, and then asked their young patients to participate. The adolescents were separately interviewed for another study by the research group. The youths were recruited from three different *Maisons des Adolescents* (adolescent outpatient psychiatric units) (33): Maison de Solenn (Hospital Cochin, Paris), Casita (Hospital Avicenne, Bobigny), and Casado (Hospital St Denis, St Denis), the latter two in disadvantaged inner suburbs northeast of Paris.

Data Collection

Once the adolescent agreed to parental interviews, research team members called the parents to provide information about the study and set up a meeting for face-to-face semistructured interviews of around an hour. Each parent was interviewed alone at the hospital, in a public place (cafe), or at their home. The interviews were conducted from January 2017 through April 2018, by one of four different people: a child psychiatrist (LB), and three residents working on different topics of the same research project (among them LR). The interview guide was designed by the research group for this study (**Table 1**). During the interview, the researcher explored the parents' narratives of their children's history of school refusal, their representations of the schools involved, the school system, and their children, and their relationships with the French public institutions providing

TABLE 1 | Interview guide (starter questions).

1. Current family situation - How old is your child? Does he/she have brothers and sisters? What is your marital and professional situation? Currently, how are things going for him/her?
2. History of the disease, understanding of the disorder - When did your child start being afraid of school? Were you the only one worrying? Did someone draw your attention to his/her difficulties? Do you remember what worried you first? What drew your attention to the problem? When and how did you understand his/her difficulties? How did your spouse (his/her mom or dad) understand them? Your family?
3. Relationships with school - How did the school react to your child's school refusal? Were you able to talk to the teachers? The school nurses? The school doctors?
4. Relationships with care - When did you decide to consult a health professional? Which one? Did you get any advice? What kind of care was provided?
5. Cultural specificities - How many languages does your child speak? When did you decide to come to France? How was the journey? What does your family think about your child's fear of school?

education and health services. All interviews were audio-recorded and transcribed verbatim, in full.

Ethical Standards

This study was carried out in accordance with the recommendations of an appropriate ethics review board (Inserm ethics review board, IRB 00003888) with audio-recorded consent. All subjects (adolescents and their parents) gave informed consent for the research and for the publication of the datasets (characteristics of the study population and direct quotations from the participants) in accordance with the Declaration of Helsinki and French law. All interviews have been anonymized and the datasets deidentified.

Analysis

The analysis applied the method of interpretative phenomenological analysis (IPA), which enables the study of the meaning subjects construct from their experiences (44). Meticulous analysis of the interviews as each was completed enabled us to identify a set of superordinate themes, each linked to several themes describing all of the experiences narrated (45). Factors considered in selecting the themes included but were not limited to the frequency with which they were mentioned, the richness of the passages illustrating them, and how they illuminated other aspects of the narrative.

The principal researcher, LR, analyzed the interviews to optimize the validity of the results. The interviews were independently coded by two researchers (LR and LB). Codes were discussed during group meetings to enable triangulation, which both enriches the analysis and serves as a quality control process (46). The methodological criteria were retrospectively verified according to the COREQ (Consolidated criteria for Reporting Qualitative research) checklist.

RESULTS

Population

Eleven migrant parents of adolescents with school refusal completed interviews. Their characteristics are summarized in

Table 2. The teenagers easily agreed to participate and let us question their parents; but it was more difficult to include parents.

Three couples were interviewed, separately: the parents of Ana, Michael, and Akash. Ana's parents both arrived in France as children. Her mother (P5) was born in Spain, her father (P6) in Portugal. Michael's parents are both French nationals. His mother (P7) was born in metropolitan France, of modest Breton origin. His father (P8) was born in Martinique, as were both paternal grandparents (of African and Indian origin). Akash's parents are both Tamils from Sri Lanka and arrived in France in the 1990s as adults. Only the father speaks a few words of French; the mother does not speak French at all. Each was interviewed with an interpreter.

In the remaining families, only mothers could be interviewed. Abdel's mother (P11) was born in Algeria but describes herself as half-Moroccan, half-Algerian. His father was born in Morocco but has Algerian nationality. Merlin's mother (P1) is French, and his father Albanian. Leila's mother (P3) is Algerian of Kabyle origin. She refused to let us question her husband, also Kabyle. Lea's mother (P4) is French and her father Italian. Lea refused to let us interview her father because of family tensions.

The parents were separated in only one family. Dalla's mother (P2) was born in Dakar, Senegal, and belongs to the Soninke community. Dalla's father, with whom Dalla has almost no contact, comes from the same community, as does her stepfather.

Thematic Analysis

The phenomenological thematic analysis of the interviews enabled us to uncover 10 themes, organized around four superordinate themes. The first shows how school refusal disrupts parental representations; the second that families perceive school refusal as their failure to achieve their obligation to succeed, to improve their children's future and opportunities by their migration; the third concerns the fluctuations of parents' representations of French schools between idealization, mistrust, and disappointment; and the last brings together the various solutions, standard, unusual, or traditional, that parents considered and their representations of them; these include the discovery of adolescent psychiatry, confrontation with otherness,

TABLE 2 | Characteristics of the study population.

N	Sex	Children first name	Place of birth	Cultural particularity	Spouse place of birth	Spoken language at home	Recruitment area
P1	F	Merlin	France		Albania	French	75
P2	F	Dalla	Mali	Soninke	Unknown	French	93
P3	F	Leila	Algeria	Kabyle	Algeria	Kabyle	93
P4	F	Lea	France		Italy	French	75
P5	F	Ana	Spain		Portugal	French	75
P6	M		Portugal		Spain		
P7	F	Michael	France		Martinique	French	93
P8	M		France	Martinique	France		
P9	F	Akash	Sri Lanka	Tamil	Sri Lanka	Tamil	93
P10	M		Sri Lanka	Tamil			
P11	F	Abdel	Algeria		Morocco	French and Arab	93

This table summarizes the social and demographic characteristics of the study population.

the difficulty of access to care, and exploration of other types of care including “traditional” methods.

The Disruption of Parental Representations by School Refusal

Culture as a Strong Element of Identity

For some parents, the culture of the country of origin is a source of comfort; for others, these memories are painful, marked by war, violence, or poverty. Some of them fled war, with no choice. The country’s historical or current problems remains a source of anxiety in some parents’ discourse, even after migration, especially when relatives still live there.

Certain character traits, described as specific to the culture of the birth country, have a strong identity value. Parental attitudes may thus be legitimized by cultural affiliations. One mother explained that the distance between her husband and her children and the gendered distribution of parental duties are due to his southern Italian origins.

*He’s having a hard time finding his place in all this....
He is a typical Italian dad; the mother raises the kids
while the dad works (P4).*

Religious faith can be a way of nurturing a cultural attachment and sense of belonging to the country of origin. Some parents, however, feel that their religious practices are irreconcilable with the standards of the host country. This raises questions about cultural transmission and strategies of integration.

Cultural Transmission and Integration Strategies

While some parents take on their cultural affiliations as facets of their identity, others teach their children that it is better to keep them private, at home. They may present risks for the child in the host country: these transmitted practices must paradoxically be both preserved and concealed. Thus, Leila’s mother teaches her daughter how to live her religious beliefs or traditions covertly, separating her private life practices from what she does in the outside world.

I’ve told her many times, “My darling, if you want to apply your religion, go to Algeria! There we apply it, it’s halal, it’s the headscarf, you dress as you want, but here if you want to succeed in your life you have to blend in!” (P3).

Another strategy parents teach their children is to cultivate a judicious distance towards the cultural logic, especially that of the country of origin. One mother, for example, described the caste system of her Soninke ethnic group with a critical tone and a sense of complicity with the interviewer, while underlining her membership in a superior caste. Children who have grown up in a different country can be critical of its traditional systems.

Cultural Confrontation Calls the Parents’ Cultural Logic Into Question

The family roles that they are expected to play in the host country can be new for the parents. Childcare professionals in

schools and in health care facilities remind parents of these differences and of the role they are supposed to adopt in the host country. School refusal challenges what it means to be a child, to be a parent, and to become an adult. It causes parents to question their family organization and upsets them, for they do not know how to be the kind of parents they feel expected to be in France. The birth country solutions to school refusal are often inapplicable. Alongside this other school culture emerges another definition of parenthood.

Adhering to the norms of parenthood of their birth country might even break the law in this different place. Parents may feel completely paralyzed in their parental role, unable even to advise their child.

At home, if we didn’t go to class, the parents would hit us, tie us up, they would beat us saying: “You have to go to class”. But here, if we beat him, we’ll end up in jail.... So, I cannot do anything, I cannot ask him, I cannot talk to him, because he gets angry and ... I cannot even try to start a discussion, or push him a little ... (P10).

Their children’s grasp of some norms and not others confuses the parents. Some young people surprisingly claim their parents’ cultural models. One adolescent explained to his mother that stopping school would not be a problem, because he would embrace Albanian culture, living in the same house as his parents. She reported what he said to her:

Albanian women stay with their parents ... I’ll go get an Albanian woman and then I’ll stay with you (P1).

School Refusal and Culture Refusal

Sometimes, school refusal accompanies the adolescent’s lack of interest in the customs of their family culture. This rejection can be very painful for parents with a strong cultural identity. When it happens, they always express their hope that it is a temporary phenomenon.

Some adolescents even demonstrate hostility toward any cultural affiliations with the country of origin. The Tamil parents developed few cultural connections to their new country, barely speaking French. They relied on their son to mediate everything. He did it all, but he refused to show any interest in Tamil customs or culture:

He’s not interested in the Tamil world, he doesn’t watch movies, music. Even when there’s a party, he sits, he doesn’t move (P10).

School Refusal as Parental Failure to Meet the Obligation to Succeed

High Expectations, Special Children Who Carry the Old Country Within and Must Succeed in the New Country

Nearly all of these parents had great hopes for these idealized children with bright futures, and all the children had been worthy until school refusal occurred. They were the pride of their parents, admired by family, friends, and teachers. In this

exile, some children carried their parents' dreams of a better life. The Tamil mother admitted:

I imagined he could study engineering, before, I dreamed that he could go for advanced schooling, that he ... I put all my dreams, in fact,... in him (P9).

The children often made these requirements of excellence their own; most demanded high academic results of themselves. Many parents pointed out that the demands for success did not come from them but from the child. Some children themselves had special ambitions, aspiring to attain a higher socioeconomic level than their parents and qualify for prestigious occupations: architect, engineer, airline plane, or upper level jobs in the luxury industry.

Some parents explained the special status of their child by their belonging to a significant caste in the country of origin. At a minimum, children are supposed to maintain the social status they had in the old country. Dalla's mother explained that her daughter belongs to the leading caste:

She's part of the caste ... Dalla, she's a princess, in fact, in her father's village, and him, he is ... king, these are the leaders of the village (P2).

When these very high cultural expectations are combined with a surface strategy of hyper-adaptation to the host country, parental demands appear paradoxical— to be proud and hide at the same time. This can lead to resistance by adolescents, who may choose to assert their family cultural identity and blame their parents for not doing so. This can cause real conflict. Leila's mother (P3) described one such argument, when her daughter was in the hospital:

[Leila] said to me, "Why didn't you tell them that I eat halal!" [I said], "Imposing on the hospital to make you a special [Halal] meal: are you crazy? (outraged tone) You don't want to eat, you say 'I'm not eating.'... Sometimes she tells me "you're not a good Muslim."

Even if they are not the oldest, these youths have had the status of an oldest child, recognized for exceptional qualities that have earned them their parents' trust. More than their siblings, they have been able to understand both the inner and the outside world. For the families where the parents do not speak French, the oldest has indeed been a translator and a guide for the new country.

Since the beginning, since the day he could read, since then, he's always helped the family to do everything.... All the questions at the bank, he explains everything. Yes, he looks at the accounts, he says, "Here is, there's the problem." He has managed everything since always (P9).

He did not share his siblings' childish behavior, but behaved as an adult who has and meets his responsibilities, to the point of parentification, that is, reversing the roles of the generations.

The families who immigrated earlier, where the parents themselves were educated in France, had more moderate expectations of their children. These parents, having endured great pressure for academic success from their own parents, have been careful not to impose this on their children.

Some parents perceive the adolescent's academic failure as a major blow, a hurt commensurate with the hopes and dreams they had for him or her. The children change from over-invested, supported in all their projects, to ... nothing. Many parents pointed out the strangeness of this failure for a child who has the ability to succeed brilliantly at school. The parents, family, teachers, and family doctors share the shock and disappointment of the demotion, as does the teenager. As Michael's mother said:

He had tremendous potential, because he has enormous potential, but hey, that's it, it's not ... basically it didn't work out (P8).

The child's failure feels to the parents like their own, aborting the social elevation they sought for the next generation. The culmination, the goal of the difficult journey of migration was supposed to be their children's success.

The Parent's Perceived Obligation to Their Social Circle and Their Family to Succeed

The expectations of academic success are thus part of a broader obligation of social success; children are called upon to climb the social ladder, but above all, they must not lose their initial social status. It is unthinkable for the parents to have a status in the host country inferior, as judged by those in the old country, to what they had had there.

Among the families that immigrated early, the parents we interviewed were themselves educated in France on their arrival. In these families, different representations of school coexist. The parents feel out of step with their family: their own parents, the grandparents of these adolescents, lived at a time when, if they even could go to school rather than work, severe corporal punishment was common, and parents always considered the teacher to be right. The more recent immigrants may even have experienced this more severe schooling in their birth country. Ana's mother describes her parent's school:

When the student misbehaved, [the teacher] put him in a corner that had salt on the floor and made him kneel on it. It was very hard to stay in that position.... Parents listened to the teachers, the teachers were right and they determined your future (P6).

From the perspective of these grandparents (and newer immigrants), going to school is an opportunity and the problem of school refusal appears completely incomprehensible, especially at a school with no corporal punishment. This intergenerational gap in school representations is found in both the French-educated families participating in the study and among families of newer migrants. This mother explains how the Italian grandmother does not understand her granddaughter's school refusal:

She didn't study at all, she went to school very little, and her life was rough, complicated. And I think she would like everything to work out, but she doesn't understand all that (P4).

This was true for all the grandparents mentioned in interviews.

The parents' representations of school are different from those of both their parents and their children. This gap leads to such opposition that a three-generation dialogue on educational and academic problems is difficult, if not impossible. Parents made it clear that their own parents are not a source of further understanding about the problem of school refusal, to whom they could turn for help. Many have thus abandoned the idea of making their parents understand their children's difficulties. The corollary of this silence is the loneliness of both the parents and grandparents, isolated from one another. Dialogue between them ends, for silence is preferable to conflict. To protect themselves, the parents say nothing or even lie. The family validation of their own parental role is at stake and endangered by the children's school refusal. This father clearly explains that abandoning his son's schooling means dishonoring the whole family, especially himself.

No, I didn't talk about it, because otherwise ... Even the high school diploma, some people asked: "did he get it? We said yes because otherwise it's a big deal. We don't talk about it.... He has to succeed so that there's pride. People won't say that he is sad, that he thinks about this or that or I don't know what. They'll just say that the parents don't know how to raise their child ... It's very hard for me ... It's as if, the fact that my son does not succeed, it's as if I had failed something, especially the oldest child (P10).

The failure of his eldest son puts his own obligation to succeed at stake. His own family laid this obligation on him when he migrated; he cannot fail. The only way for this father to avoid stigma is to lie.

Representations of School: Idealization, Mistrust, and Disappointment

Disappointment

Some parents, because they immigrated as adults, or because they lack an academic education, knew nothing about the French school system and idealized it. In general, parents counted on the school to enable their children to climb the social ladder.

Most were aware of the inequalities in schools and their success (or failure) rates. Often dissatisfied with the school maps, they looked for the best possible institution. They sought the best possible conditions for their child: tranquility but also access to a certain level of shared culture.

Some parents had learned that French schools were far from ideal during their own childhood, when they arrived at an early age and began school. Several fathers and one mother had faced discrimination in schools that had oriented them early on towards vocational classes and hurt them deeply all along the

way. The racist clichés and discriminatory actions of teachers and other pupils intensified language problems. Ana's father endured jokes about the Portuguese; Abdel's mother could not find a single apprenticeship in hairdressing in Lille.

Every time I went for an internship ... I was told "We don't take North Africans." It disgusted me and I gave up (P 11).

Many viewed the school system as racist, implicitly ranking immigrants according to context and country of origin. They were wary of the school environment, where discrimination is implicit if it is not explicit. It seemed inevitable to most of the parents interviewed that their children would someday be victims of racism.

The fact that he is mixed-race, precisely, I paid special attention to that because I know it's a delicate matter (P7).

This mother, married to a native of Martinique, then implied that it is easier to be of Korean origin than of African and Martiniquais origin, that is, that being Asian is generally better accepted than being black. Another mother explained that her daughter has her father's Portuguese last name and is thus entitled to several nicknames and repeated jokes about Portuguese *concierges* (caretakers).

The higher the level, the more discriminatory schools become. Michael began his school refusal in architecture school; his mother explained that these schools are less diverse; she worried about the trivialization of racist clichés that her son innocently reports to her.

Know the School and Its Limits, Adapt, and Act

Communication with the school requires several prerequisites, which the schools themselves do not appear to be aware of. The need to decode what goes on and is said in school is obvious to families who have been living in the country for a long time, especially when the parents attended school here. The situation is quite different for families who have migrated only recently, especially if they come from a country with a radically different school culture.

The overall school institution is culturally coded; being able to identify the different interlocutors requires specific knowledge of its organization. The example of the Tamil family is especially striking because it is the only family in which neither parent speaks fluent French. They were summoned to be informed of their son's severe difficulties by a school psychologist using an interpreter, by telephone. They did not understand the psychologist's function and had never seen her before. These communication difficulties resulted in shocking and sudden awareness of their son's problems. They understood the extent of these problems and how long they had been present only later; they felt completely shunted aside by the school. Indeed, we only understood what happened because a Tamil interpreter was present during the research interview. The father received text messages that his son was absent but lacked the linguistic and

cultural knowledge to perceive the implicit content of the messages.

One criterion of knowledge of the system is the ability to challenge it. Being able to look critically at the school system and find the best solution for one's children requires extensive knowledge. For example, Ana's mother had a friend who was a Spanish teacher, who criticized the private school that both their children attended, specifically on the basis of a teacher's inadequate written French. To be able to observe these errors requires, quite obviously, excellent mastery of the French language. The mother, Spanish and long well-integrated, has no illusions about the integrating role of this school. It is clear to her that the school will not understand or care about cultural differences; she knows it's impossible:

The teachers are overwhelmed ... It's a Catholic school, but there are Muslims, there are Jews, there's a little bit of everything (P5).

Some informed parents choose private schools, as Ana's father did, to protect their children from the French public-school system, the racism of which he had experienced and suffered from when he was a child:

We decided to put them in a private school because it would be better for them, they would have normal lessons, they would be in a good school, a good class, with good pupils. So that they would have what I did not (P6).

Solutions Envisioned for School Refusal and Their Representations

Encountering the Mental Health System: Calling Otherness Into Question Again

Lacking the necessary institutional codes makes a relationship to mental health care similar to that to the school. Parents sit at consultations in a discreet, withdrawn posture for fear of making a mistake or breaking some taboo and being judged a bad parent. Professionals sometimes misinterpret this attitude and think that the parents are uninvested, although it is actually a sign of respect and an effort not to interfere. Hospitals and clinics, like schools, are public establishments, a symbol considered equivalent to French culture.

The rules of the health care system can unintentionally violate various cultural representations of parenting. The concept of majority that gives young people access to medical confidentiality can distress a Tamil woman as a mother by excluding her from her child's care. Some parents felt stigmatized because of their cultural difference and perceived a need to defend themselves. Families are often struck by the systematic questions about their own childhood or their way of life when they do not, at least at first, see that these have any association with their children's difficulties. Their cultural difference is thus perceived as a possible flaw in their parenting. Stigma can extend to factors besides cultural origin, such as family models. A mother stigmatized because she grew up in foster or

residential care has similar difficulties in defending herself from an insistent psychiatrist or social worker.

Real Inequalities in Access to Health Care

Standing up to judgments and to cultural stigma requires self-assurance on the part of parents. Some families question the relevance of care, but questioning is an ability that must be acquired; as for the school system, knowledge is necessary. School refusal often seems treatment-resistant, and the parents' helplessness is reflected by the failure of psychiatry in their discourse.

Knowledge of the health care system is an evident advantage in obtaining quick access to specialized structures. A strong relational network makes it possible to find an appropriate facility. Ana's parents have been in France since they were children and have an extended social network in Paris. A friend recommended the *Maison des Adolescents*, and they obtained an appointment within a reasonable delay.

By contrast, the lack of both knowledge and a network resulted in a very long delay in appropriate care for the Tamil family, isolated and unable to communicate easily in French. Their child Akash was not referred to the *Maison des Adolescents* until very late, after almost two years of severe absenteeism, on the eve of his baccalaureate examination. This delay was due mainly to communication problems with the school.

Exploring Other Solutions Outside the Standard French System

Traditional or "old-country" therapies appeared to be a taboo subject. While Leila talked easily about the different explanations of her difficulties by her family in Algeria and the possibility that someone cast a hex on her, her mother was defensive about the idea, responding vaguely, vacillating between agreement and refusal. The mother quickly dropped this hypothesis, attributing it to her own mother or husband and positioning herself outside these cultural representations:

That's what my mom told me ... my husband agrees with you. He says it's not their fault. It's like you say, it's not on purpose. But after all, I don't know what to think (P3).

Leila's mother was uncomfortable talking about traditional Kabyle practices, but we know from the interview with Leila that a traditional ritual was performed to protect her. The mother expressed a pejorative view of those popular beliefs: "if we listened to them," "them" as opposed to herself, "a believer" with a strong Muslim identity. She contrasted Kabyle rituals to Muslim belief and minimized their impact.

Abdel's mother also quickly refuted the evil-eye hypothesis. She made fun of it, labeling it "that rigmarole."

Yes, I must admit, when my son wasn't feeling well after the wedding, I thought about it. I thought about it. After, it's over. I thought maybe at the wedding, there were many family members and all that. It's true with us, there is a lot of rigmarole. I thought about it (P11).

Akash's father also avoided the question of traditional therapies for his son. He imagined a somatic cause for his son's school refusal. This representation was invalidated by the French model, where anxiety is represented as something psychological instead.

Me, I proposed to go see a specialist, a neurologist, and I was told that it was useless, that it was not the problem, but that it was rather here, that it was work that's not so neurological or ... medical at this level, but rather psychiatric (P10).

Akash's mother was much more at ease describing the care they sought. Less defensive, she spontaneously explained that they saw a traditional Tamil priest who was both an astrologer and numerologist. His divination linked Akash's problems to the position of the stars, unfavorable to him. She described the prescriptions she followed in both countries, for the priest recommended prayers in France and offerings in Sri Lanka.

Nonetheless, the hypothesis of a vulnerability due to migration emerges from her discourse, linking the fatigue that prevents her son from going to school to a difficulty in reconciling two poles, hot and cold, India and France. This problem developed when he was little. The etiological hypothesis is thus that a violent cultural blending made Akash vulnerable—the violent differences between the two countries, the two climates.

We went to India when he was little and at that time it was very, very hot there, he ate lots and lots of ice cream, because it was very hot.... And when he came back here, he caught something. I think it's linked to the heat and the cold here ... he was hospitalized more than two weeks, he had more than 40°C fever, we had to immerse him in cold water so that his body ... It was very hard for me.... But we never knew what it was. And after, it was better, but the fatigue remained, the physical fatigue (P9).

Other families looked for new solutions inspired by other models. Some joined community groups against bullying, while others served as parents' representatives. Those parents, extremely invested in their child's schooling and trying to make up for the insufficient protection of the school system by intervening more at the school level, were the most socially integrated parents in the study.

For Ana's family, which is also very well integrated, one solution considered was sending her abroad to avoid the French school system. This family knows a lot about other existing school systems. They claim that their migratory experience is a strength that will allow Ana to travel if she wants and find another solution, elsewhere, if no solution in the French system suits her. The father has traveled repeatedly back and forth between France and Portugal, claiming this freedom with a certain pride.

If that's what she wants and if it's better elsewhere, yes of course without hesitation, she'll leave. Maybe she'll come back, we don't know, maybe she'll stay or she'll go wherever she wants. In the family we are travelers, you know. (Laughter) We've gone to the four corners of the world so that's it, we are travelers (P6).

DISCUSSION

School Refusal Calls Family Roles Into Question

Mothers responded to our research with enthusiasm. Most of them gladly shared their experiences, and many pointed out at the end of the interview that they had confided more than they had thought. They transmit their birth country culture and those speaking a different language teach it to their children: Spanish for Ana, Tamil for Akash, Arabic for Leila and Abdel. They also transmit coping and adaptive strategies to their children to help them avoid discrimination. These strategies reveal their representations of the French system; because they think the system is intolerant of their Muslim religion, both Abdel's and Leila's mothers have taught their children to remain discreet and hide their differences from the outside world.

Fathers are significantly underrepresented in these interviews, perhaps reflecting a weakened paternal function. Only one family, Dalla's, included a stepparent; all the other sets of parents were still living together. We were unable to interview half the fathers, although we repeatedly asked to do so. Lea, in conflict with her father, refused to allow us to interview him. Another father could not be reached. An appointment with Leila's father was set up, but his wife forbade the contact. Three fathers were interviewed. Two had immigrated as children and speak excellent French; both experienced racism as children, and both were particularly concerned about their teenagers' academic difficulties. The third had arrived more recently and spoke very little French. He actually came to the interview due to a misunderstanding: he thought he had an appointment with his son's care team, rather than a research interview.

These interviews shed light on the fathers' roles. In patriarchal societies, the father is the interface permitting family and society to interact (47). Migration weakens the paternal function because he lacks knowledge about the host country culture and rules; often at the same time, however, he is the breadwinner, whose work determines the family's economic and social status. Linguistic obstacles and economic difficulties combine to call his place into question. An educational model in the host country radically different from that in the birth country can be a real challenge for paternal function. This is the case for Akash's father who tends to withdraw respectfully. He misunderstood the apparent attitude of the French educational system, misperceiving it to prohibit him from raising his child in his own way; this withdrawal in turn led the school to view him as an

uncaring or neglectful father. The original devaluation of the culture goes hand in hand with depreciation of the parental image and can result in adolescents' absence of interest in their parents' culture, as it did for Akash. This depreciation of the image with which the adolescent naturally identifies may be considered one key to school refusal in migrant families; it leads to a depressive affect among these adolescents, as well as to their parentification (48).

The generation of grandparents and the extended family are also concerned by school refusal. Grandparents, whether remaining in the birth country or living in the new country, mostly did not have the opportunity to attend school but worked from a very early age. They do not understand the adolescents' problems. This misunderstanding can lead to a breakdown in relationships between grandchildren and grandparents, but also between the grandparents and their own children. Family ties are challenged by school refusal, often notably loosened. Parents sometimes even lie to their parents to hide the school problems.

Parental loss of authority sometimes results in the teenager's parentification. The parents in this study mainly described their children by terms such as mature and responsible. Studious and trustworthy, their parents delegated many responsibilities to them. The cases of Leila and Akash are particularly representative. Leila was treated as the oldest when she is in fact the second oldest sibling, and Akash was considered to be the only child able to translate the French world to his parents and to fully understand them. He therefore became an essential interpreter of the French world for his parents. In extreme cases, this mechanism results in a paradoxical filiation (49), where the son finds himself above his father's law. We can wonder if these adolescents' roles as mediators, interpreters, and translators of the institutions of France might perhaps confer too much power on them, bestow an omnipotence that hinders their adaptation to the school and social systems.

Transcultural Interpretation of Anxiety-Based School Refusal

All the adolescents involved in this study were good, even excellent students, until anxiety exploded—anxiety about school, about knowledge—and froze everything. School refusal raises questions about relations to knowledge, desire to learn, and hunger for autonomy. In the words of Margaret Mahler, migration can be thought of as a process of separation-individuation: in separating from the country of origin, the migrant also separates from internal objects related to it (50). For these second-generation migrant youth, the construction of adolescence, the desire for autonomy, the investment of the outside world, might well conflict with their loyalty to their family, to their parents' culture. Unless they can negotiate a resolution by blending these two cultures, this conflict can substantially inhibit their cognitive and social functioning in the school environment.

All of these teenagers were enrolled in general (i.e., academic) education programs and had good grades; each had intended to continue postsecondary studies after high school. When

children's anxiety prevents them from attending middle or high school, their future—their occupation, their income, their social status—is jeopardized. Several of their parents repeatedly insisted to us on these adolescents' wonderful qualities, describing them as brilliant youths with bright futures in professions far above those of their parents. These teens may perceive their parents to be asking their child to invest, succeed in the host society, where the parents have not achieved as much as they would have liked. This imposed obligation may be especially painful in adolescence, when the construction of identity imposes so many choices of culture, acceptance, and loyalty (37).

From a transcultural point of view, school refusal can be interpreted as resulting from the problems adolescents have in managing simultaneously their relations with their family and with the outside world of school, as well as the relations between their family and school. This difficulty is associated with a fragile representation of self, parents, and family. Another manifestation of this conflict is an oscillation between moments of rejecting their parents' culture and returning to it. These contradictory movements accompanying school refusal upset parents. They worry that their child will no longer participate in community festivities; inversely they are surprised to see their teenager again interested in things related to the parents' birth country. Ana's father is surprised that she is learning Portuguese, his native language, while refusing to attend school. Leila's case is an extreme example, with a massive cultural division separating the inside world, the house, where family members can live according to their culture and their religion, and the outside world, where they must hide any differences to blend in with the majority culture. There is no room for negotiation in Leila's construction of identity; she must hide her profound cultural identity from the outside world. No blending or mixing of cultures appears possible. School refusal might thus be understood as a refusal of the outside world, preventing exchanges between it and her inner world and thus temporarily avoiding anxiety-inducing encounters. Extra-familial mutism can accomplish the same goal (35).

The transgenerational obligation to succeed, in the words of Lebovici (51), concerns both parents and children. It is very hard for parents to surrender their dreams for their child's success, especially when it was often part of their reason for migration. Some parents persist in their aspirations for success although their child has refused to attend school for several months. This inability to adapt their expectations borders on denial. In other families, the failure to meet the transgenerational obligation to succeed occurred in the previous generation, when the parents, who arrived as children, disappointed their own parents' hopes. In these families, there is less denial, more understanding, and more patience.

In France, many immigrants come from formerly colonized countries, and many more French citizens are their children or grandchildren. Four of the families in this study, that is, half the research population (or rather at least one parent from each of these families) comes from former French colonies: Senegal, Morocco, Algeria, and Martinique. Its colonial past remains a delicate topic in France. When the parents come from a former

colony, however, conscious and unconscious elements of colonial history may persist in their relations with French institutions. Parental discourse may reflect this relation of domination between the host country and their birth country, for example, when it praises the host country at the expense of the birth country (52) or when the parent deliberately remains withdrawn from a conversation. This asymmetry affects adolescents' relations with the only French institution they have to deal with: school. No parent spontaneously broached the issue of colonial history during the research interviews. It nonetheless implicitly appeared in the mothers' repeated recommendations to their children to be polite, respectful, and discreet, to avoid any problems. These injunctions of invisibility are implicit, but omnipresent, formulated as parental expectations, advice, and strategies to cope with cultural differences.

This discretion also extended to the content of the research interviews, where parents rarely discussed their birth culture spontaneously. Only the Tamil mother mentioned on her own initiative traditional rituals that families can perform to cure the anxieties of adolescents. In his study of Algerian immigration, Abdelmalek Sayad has theorized that this phenomenon is a domination relationship typical of colonialism and extends to the French mainland territory. He denounces politeness as an instrument of exclusion from political life, a ban on taking part in public life (53). The mothers in the two families of Algerian and Moroccan origin made clear that they have enjoined their children to be discreet. Malika Mansouri links the educational difficulties of migrant children with transgenerational trauma (54). Integrating both colonial and postcolonial history in education as well as in aspects to be thought about in health care may be a key point in considering the school problems of migrant children from former colonies.

In this postcolonial study perspective, school refusal might sometimes be considered to be the resurfacing of repressed colonial memory and a way of refusing the cultural asymmetry demanded by the institution and integrated into the parental discourse.

Limitations and Prospects

The first limitation of this study is that it cannot show the evolution of these parental representations, which will be reshaped over time. It would accordingly be interesting to repeat the interviews with the participating parents later on.

A second limitation is the small number of parents involved in transcultural situations, compared with the total number of adolescents included in the research group. Several adolescents in transcultural families refused to consent to their parents' participation in the study. This refusal can be interpreted as an illustration of the dual process by which these adolescents identify with and in some sense reject their migrant parents. These results cannot be considered to be final or even stable as we did not attain data saturation, but several similarities in the data do allow us to sketch three ideal types of parents according to the time since they arrived in France, as we did at the beginning of the results section, in describing the population. Although including more participants would have increased the accuracy

and validity of this study, this is the first examination of this topic and it appears likely that migrant parents are particularly hard to reach, given their difficulties in having their child's anxiety-based school refusal detected/diagnosed (and the school system's predisposition to treat the attendance problems of immigrants' children as truancy) and in accessing mental health care and a school support system. Given these issues, 11 parents is a more than decent number of inclusions for a prospective qualitative study.

A third limitation is the lack of detailed information about these families' socioeconomic status as well as the evident reciprocal confounding between socioeconomic and migrant status. As pointed out above, socioeconomic status is associated with school attendance and probably school refusal (26–28), and migrant status quite often associated with socioeconomic deprivation. We do know that the socioeconomic status of these families ranges from low to medium and that two of the three recruitment centers are in disadvantaged neighborhoods. Nonetheless, given that our aim was to focus on the transcultural aspects of school refusal, more socioeconomic data might only have further blurred the interpretation of our results.

Implications for Practice: the Need to Take Otherness Into Account

Their children's schooling is a major issue for migrant parents. While a child's school refusal may finally mandate communication between the parents and the school, numerous obstacles remain. For many, there is the language barrier, which affected only one family in our sample but appeared nearly insurmountable. The failure to provide an interpreter for more than a year caused substantial delay in healthcare support for Akash and may have prejudiced his prognosis. This difficulty in surmounting the language barrier for any care probably explains why this family is the only non-French-speaking family we were able to recruit.

School-related cultural codes are another obstacle; texted absence messages are a prime example. When a student misses class, parents receive a text message from the school, reporting the absence. This is an implicit invitation from the institution: the school expects parents to be concerned enough to contact them and ask for an appointment. If they do not, the parents will be considered uninvolved in the child's schooling, uninvested, and negligent if not neglectful (55). However, this discreet posture may, on the contrary, be a sign of deep respect for the educational institution by some parents of a different culture, as for Akash's family. Bernard Lahire's portraits of families—all of them either working-class or disadvantaged—with children failing in French schools showed that dealing with schools (that is, institutions) necessitates knowledge of the school culture to be able to decrypt its requests and meet its requirements (56). Migrant families from a distant culture and families with disadvantaged social backgrounds have analogous difficulties in understanding this culture and its codes. Families from countries with a similar school culture, such as Spain, Portugal, or Italy, do not face this problem, for their school cultures are close enough to allow their codes to be transposed to

the French system. In multicultural couples, the French spouse decodes the institution if necessary. The closer the family's school culture is to that of France, the faster school refusal is identified and dealt with.

This observation suggests that it might be possible to set up and disseminate cross-cultural mechanisms for school mediation, either individual or collective. To our knowledge, only one such program exists, METISCO; it also includes a parenting support component and training support for school professionals (36).

It is essential to take into account the cultural and identity issues involved in adolescents' school refusal, at the individual, family, and collective levels. Psychiatrists must investigate the cultural representations surrounding school refusal of adolescents and their parents, as well as the family's cultural representations of school. Other early intervention programs, such as for psychosis, have already been improved by including a transcultural dimension to their clinical assessment tools (57) and institutional practices (58).

Acknowledging the family's experiences of racism and discrimination while listening to them describe these events is also compulsory. It appears to be an essential step in the therapeutic management of adolescents' school refusal and in dialogue with their parents. Although school and health care systems are claimed to be increasingly inclusive, difference continues to incite discrimination in school (50) and in access to care. The more systematic, institutionalized use of interpreter-mediators might be useful in reducing some of these issues.

All the adolescents in our study were born in France, but the parents differ quite notably: some left their country of origin when they were children themselves to settle in France with their migrant parents, while others arrived later, already adults, without their family. The complexity of this landscape of migrant parents is a result in itself, demonstrating that short cuts and simplifications are inadequate. The first group faced language barriers as children but are now good French speakers. The question of their cultural identity only resurfaces with their children's adolescence and school difficulties. More recently arrived families, especially from non-European cultures quite distant from French culture, lack knowledge of French codes in nearly every field, including culture, school, parenting, and society. This ignorance significantly impedes the provision of and access to care for their children. The difficulties are paradigmatic of those faced by migrant parents of a child with a mental illness. While their questions about their parenting ability vary, all of them have some. School refusal causes them to interrogate their relationship to their culture of origin, their representations, and their family system. It also systematically disrupts the family balance.

As mentioned above, we observed three different family profiles, according to their degree of familiarity with the French system. Akash's parents arrived from Sri Lanka as adults, knowing neither social codes nor local cultural codes of France. They have no social resources outside the Tamil community and speak very little if any French. For them, migration was accompanied by idealization of the host country. They had high expectations of their child and of both the schools and health care institutions, accompanied by

almost blind trust in both their son's success and the institutions they were dealing with.

The families of Dalla, Abdel, and Leila were more familiar with French cultural codes, but they were nonetheless not their own. These three families come from non-European cultures as well as Morocco, Algeria, and Senegal. They also had high expectations of their children and school, but they were distrustful of French institutions, which had already disappointed them. They have social resources in their country of origin as well as relationships they built in the host country.

Finally, the families of Ana, Lea, Merlin, and Michael were much more familiar with the French system and its institutions. Each of these sets of parents is bicultural. Three mothers are from metropolitan France, and the others all from Europe: Spain, Italy, Albania, and Portugal. The expectations of these families are more moderate, both in regard to their children's academic achievements and the school's ability to educate and protect their children. These four families have well-developed French social networks and the knowledge that enables them to have a critical view of institutions.

CONCLUSION

School refusal distresses parents. Our research, focused on the experiences of migrant parents dealing with the school refusal of their children, was also an invitation to think about cultural differences in providing mental health care to adolescents and in meeting with their parents.

During their narratives of this experience, these parents told us they had had to think about who their child really is and what they really think about parenting and parenthood. They also learned how to address the school and to look for solutions for school refusal. At each of these stages, their cultural representations have been called into question. This study illustrates the need to take into consideration the parents' culture and migration history in the management of school refusal. With their children no longer able to attend school, the parents had to rethink their family patterns and parental choices, their relations to French educational institution, the histories of their families and communities. From a transcultural point of view, school refusal can be seen as the adolescent's inability to manage their two worlds—their family and their school, at a time when identity construction requires them to negotiate between them. It can therefore be seen as a genuine failure of cultural blending.

Children's school refusal calls into question the success of the parents' migration, casting a negative valence on it afterwards and leaving the parents to wonder about their family patterns, their parenting choices, their relations with France's educational and health care institutions and beyond—for school is a gateway to France itself.

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

This study was carried out in accordance with the recommendations of an appropriate ethics review board (Inserm ethics review board, IRB 00003888) with audio-recorded consent. All subjects (adolescents and their parents) gave informed consent for the research and for the publication of the datasets (characteristics of the study population and direct quotations from the participants) in accordance with the Declaration of Helsinki. All interviews have been anonymized and the datasets de-identified.

AUTHOR CONTRIBUTIONS

The study was designed by LB, who also asked the competent institutional review board (Comité d'éthique de l'Inserm) to

approve this study. The principal researcher, LR, analyzed the interviews to optimize the validity of the results. The interviews were independently coded by two researchers (LR and LB). Codes were discussed during group meetings [LR, LB and MM) to enable triangulation, which both enriches the analysis and serves as a quality control process.

FUNDING

This study received funding from the French National Institute of Health and Medical Research (Inserm) through Laelia Benoit's PhD grant and from private contributors through the Thellie Foundation for the project "Understanding pathways to care in school refusal and improving them."

REFERENCES

- Heyne D, King NJ, Tonge BJ, Cooper H. School refusal: epidemiology and management. *Paediatric Drugs* (2001) 3(10):719–32. doi: 10.2165/00128072-200103100-00002
- Heyne D, Gren-Landell M, Melvin G, Gentle-Genitty C. Differentiation between school attendance problems: why and how? *Cogn Behav Pract* (2019) 26(1):8–34. doi: 10.1016/j.cbpra.2018.03.006
- Berg I. Management of school refusal. *Arch Dis In Childhood*. (1985) 60(5):486–8. doi: 10.1136/adc.60.5.486
- Bools C, Foster J, Brown I, Berg I. The identification of psychiatric disorders in children who fail to attend school: a cluster analysis of a non-clinical population. *Psychol Med*. (1990) 1(1):171–81. doi: 10.1017/S0033291700013350
- Kearney CA, Silverman WK. Family environment of youngsters with school refusal behavior: a synopsis with implications for assessment and treatment. *Am J Family Ther* (1995) 23(1):59–72. doi: 10.1080/01926189508251336
- Coolidge JC, Willer ML, Tessman E, Waldfogel S. School phobia in adolescence: a manifestation of severe character disturbance*. *Am J Orthopsychiatry*. (1960) 30(3):599–607. doi: 10.1111/j.1939-0025.1960.tb02075.x
- Last CG, Strauss CC. School refusal in anxiety-disordered children and adolescents. *J Am Acad Child Adolesc Psychiatry* (1990)(1):31–5.
- King NJ, Tonge BJ, Heyne D, Pritchard M, Rollings S, Young D, et al. Cognitive-behavioral treatment of school-refusing children: a controlled evaluation. *J Am Acad Child Adolesc Psychiatry* (1998) 37(4):395–403.
- Walter D, Hautmann C, Rizk S, Petermann M, Minkus J, Sinzig J, et al. Short term effects of inpatient cognitive behavioral treatment of adolescents with anxious-depressed school absenteeism: an observational study. *Eur Child Adolesc Psychiatry* (2010) 19(11):835–44. doi: 10.1007/s00787-010-0133-5
- Baker H, Wills U. School phobia: classification and treatment. *Br J Psychiatry* (1978) 132(5):492–9. doi: 10.1192/bjp.132.5.492
- Hersov L. School refusal. *BMJ* (1972) 3(5818):102–4.
- Bernstein GA, Hektner JM, Borchardt CM, Mcmillan MH. Treatment of school refusal: one-year follow-up. *J Am Acad Child Adolesc Psychiatry* (2001) 40(2):206–13.
- Flakierska-Praquin N, Lindström M, Gillberg C. School phobia with separation anxiety disorder: a comparative 20- to 29-year follow-up study of 35 school refusers. *Compr Psychiatry* (1997) 38(1):17–22.
- Holzer L, Halfon O. Le refus scolaire. *Arch Pédiatrie* (2006) 13(9):1252–8.
- Maynard BR, Heyne D, Brendel KE, Bulanda JJ, Thompson AM, Pigott TD. Treatment for school refusal among children and adolescents: a systematic review and meta-analysis. *Res Soc Work Pract* (2018) 28(1):56–67. doi: 10.1177/1049731515598619
- Heyne D. School Refusal. In: Fisher JE, O'Donohue WT, editors. *Practitioner's Guide to Evidence-Based Psychotherapy*. Springer US: Boston, MA (2006). p. 600–19.
- Johnson AM, Falstein EI, Szurek SA, Svendsen M. School Phobia. *Am J Orthopsychiatry* (1941) 11(4):702–11. doi: 10.1111/j.1939-0025.1941.tb05860.x
- Berg I. School phobia in the children of agoraphobic women. *Br J Psychiatry* (1976) 128(1):86–9.
- Carless B, Melvin GA, Tonge BJ, Newman LK. The role of parental self-efficacy in adolescent school-refusal. *J Fam Psychol* (2015) 29(2):162–70. doi: 10.1037/fam0000050
- Hersov LA. Refusal to Go to School. *J Child Psychol Psychiatry* (1960) 1(2):137–45. doi: 10.1111/j.1469-7610.1960.tb01988.x
- Sudres J-L, Brandibas G, Fourasté R. La phobie scolaire: symptôme, entité spécifique, syncrétisme ou syndrome d'inadaptation? *Neuropsychiatr l'Enfance l'Adolescence* (2004) 52(8):556–66.
- Girardon N, Guillonnet J. Phobie scolaire à l'adolescence. *Perspect Psy* (2009) 48(4):375–81. doi: 10.1051/pps/2009484375
- Bourdieu P. (2015). *Esquisse d'une théorie de la pratique: précédé de Trois études d'ethnologie kabyle*. Paris: Librairie Droz.
- Yamada M. *The Japanese Family in Transition*. Japan: Foreign Press Center (1998). p. 60.
- Kameguchi K. Empowering the spousal relationship in the treatment of Japanese families with school refusal children. In: *Culturally responsive interventions: Innovative approaches to working with diverse populations*. Brunner-Routledge: New York, NY, US (2004). p. 125–41.
- National Center for Education Statistics. *The condition of education*. US Department of Education: Washington, DC (2006).
- Franklin CG, Soto I. Keeping Hispanic Youths in School. *Children Schools*. (2002) 24(3):139–43. doi: 10.1093/cs/24.3.139
- Yang K-E, Ham S-H. Truancy as systemic discrimination: Anti-discrimination legislation and its effect on school attendance among immigrant children. *Soc Sci J* (2017) 54(2):216–26. doi: 10.1016/j.soscij.2017.02.001
- OECD. *Immigrant Students at School: Easing the Journey towards Integration*. OECD. Paris: OECD Reviews of Migrant Education (2015).
- Chau K, Baumann M, Kabuth B, Chau N. School difficulties in immigrant adolescent students and roles of socioeconomic factors, unhealthy behaviours, and physical and mental health. *BMC Public Health* (2012) 12(1):453. doi: 10.1186/1471-2458-12-453
- Kearney CA. School absenteeism and school refusal behavior in youth: a contemporary review. *Clin Psychol Rev* (2008) 28:451–71.
- Benoit L, Barreteau S, Moro MR. « Phobie scolaire chez l'adolescent migrant », la construction identitaire dans une approche transculturelle. *Neuropsychiatr l'Enfance l'Adolescence* (2015) 63(2):84–90.

33. Benoit L, Cottin P, Moro MR. What is a “Maison des Adolescents”? A history of integrated youth health care services in France. *Early Interv Psychiatry* (2018) 12(5):1000–5. doi: 10.1111/eip.12680
34. Moro MR. *Troubles à l'adolescence dans un monde en changement: Comprendre et soigner*. Paris: Armand Colin (2013). p. 138.
35. Moro MR. *Parents en exil: psychopathologie et migrations*. Presses univ. de France; Paris (2011).
36. Sarot A, Moro MR. L'école, première institution d'accueil de l'altérité: pour une société inclusive. *Le sujet dans la cite* (2016) N 7(2):65–76. doi: 10.3917/lsdlc.007.0065
37. Baubet T, Moro MR, Bouaziz N, Marcelli D. (2013). *Psychopathologie transculturelle*. Paris: Elsevier Masson
38. Benoit L, Harf A, Skandrani S, Moro MR. Adoption internationale: le point de vue des adoptés sur leurs appartenances culturelles. *Neuropsychiatrie de l'Enfance et de l'Adolescence* (2015) 63(6):413–421.
39. Benoit L, Harf A, Sarmiento L, Skandrani S, Moro MR. Shifting views and building bonds: Narratives of internationally adopted children about their dual culture. *Transcult Psychiatry* (2018) 55(3):405–27. doi: 10.1177/1363461518764250
40. Benoit L. *Du refus scolaire au suivi psychiatrique. Trajectoires d'adolescents déscolarisés*. Doctoral dissertation. France: University of Paris Saclay, France (2018).
41. Glaser BG, Strauss AL. *The discovery of grounded theory: strategies for qualitative research. 4. paperback printing*. Aldine: New Brunswick (2009). p. 271.
42. Revah-Levy A, Birmaher B, Gasquet I, Falissard B. The Adolescent Depression Rating Scale (ADRS): a validation study. *BMC Psychiatry* (2007) 7(1):2. doi: 10.1186/1471-244X-7-2
43. Patton MQ. *Qualitative research & evaluation methods: integrating theory and practice. 4th ed. . SAGE Publications, Inc: Thousand Oaks, California* (2015). p. 806.
44. Smith JA ed. *Qualitative psychology: a practical guide to research methods. 2nd ed. Los Angeles, California: SAGE Publications* (2008). p. 276.
45. Murray M, Chamberlain K. *Qualitative Health Psychology: Theories and Methods*. SAGE Publications Ltd: 1 Oliver's Yard, 55 City Road, London EC1Y 1SP United Kingdom (1999).
46. Wertz FJ ed. *Five ways of doing qualitative analysis: phenomenological psychology, grounded theory, discourse analysis, narrative research, and intuitive inquiry*. New York: Guilford Press (2011). p. 434.
47. Scandariato R. (1994). *Quand on a besoin d'un chef de famille. La place du père dans les familles immigrées. Approche systémique*. Dialogue. Erès, Dialogue pp. 39–41.
48. Marteaux A. La fragilisation de la fonction paternelle dans le processus migratoire. *Cah. critiques ther. familiale pratiques reseaux* (2002) 28(1):157–64. doi: 10.3917/ctf.028.0157
49. Benhadj Lekhdar D. La relation fils-père ou les effets pervers de la filiation paradoxale. In: Bensalah N, editor. *Familles turques et maghrébines aujourd'hui: évolution dans les espaces d'origine et d'immigration*. Louvain-la-Neuve: Maisonneuve et Larose; Academia: Paris (1994).
50. Mirsky J, Kaushinsky F. Migration and growth: separation-individuation processes in immigrant students in Israel. *Adolescence* (1989) 24(95):725–40.
51. Lebovici S. *Psychopathologie du bébé*. Presses universitaires de France: Paris (1989).
52. Bhatia S, Ram A. Theorizing identity in transnational and diaspora cultures: A critical approach to acculturation. *Int J Intercultural Relat* (2009) 33(2):140–9. doi: 10.1016/j.ijintrel.2008.12.009
53. Sayad A. *L'immigration ou les paradoxes de l'altérité*. Raisons d'Agir: Paris (2006). p. 216.
54. Mansouri M. *Révoltes postcoloniales au cœur de l'Hexagone*. Presses Universitaires de France (2013).
55. Martin R, Benoit JP, Moro MR, Benoit L. School refusal or truancy? A qualitative study of misconceptions among school personnel about absenteeism of children from immigrant families (For further details, kindly see the submitted manuscript ID: 501909; editor: David Heyne).
56. Lahire B. *Tableaux de familles: heurs et malheurs scolaires en milieux populaires*. Le Seuil: Paris (2012).
57. Deriu V, Moro MR, Benoit L. Early intervention for everyone? A review of cross-cultural issues and their treatment in ultra-high-risk (UHR) cohorts. *Early Interv Psychiatry* (2018) 12(5):796–810. doi: 10.1111/eip.12671
58. Martin R, Moro MR, Benoit L. Is early management of psychosis designed for migrants? Improving transcultural variable collection when measuring duration of untreated psychosis. *Early Interv Psychiatry* (2018) 3:347–57. doi: 10.1111/eip.12701

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2020 Rosenthal, Moro and Benoit. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



Internalizing Symptoms as Predictors of School Absenteeism Severity at Multiple Levels: Ensemble and Classification and Regression Tree Analysis

Mirae J. Fornander* and Christopher A. Kearney*

Department of Psychology, University of Nevada, Las Vegas, Las Vegas, NV, United States

OPEN ACCESS

Edited by:

Jesus de la Fuente,
University of Navarra, Spain

Reviewed by:

Giuseppe Mannino,
Libera Università Maria SS. Assunta,
Italy

Caterina Fiorilli,
LUMSA University, Italy

*Correspondence:

Mirae J. Fornander
mfornand@unlv.nevada.edu
Christopher A. Kearney
chris.kearney@unlv.edu

Specialty section:

This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Psychology

Received: 28 June 2019

Accepted: 29 December 2019

Published: 21 January 2020

Citation:

Fornander MJ and Kearney CA
(2020) Internalizing Symptoms as
Predictors of School Absenteeism
Severity at Multiple Levels: Ensemble
and Classification and Regression
Tree Analysis.
Front. Psychol. 10:3079.
doi: 10.3389/fpsyg.2019.03079

School attendance problems are highly prevalent worldwide, leading researchers to investigate many different risk factors for this population. Of considerable controversy is how internalizing behavior problems might help to distinguish different types of youth with school attendance problems. In addition, efforts are ongoing to identify the point at which children and adolescents move from appropriate school attendance to problematic school absenteeism. The present study utilized ensemble and classification and regression tree analysis to identify potential internalizing behavior risk factors among youth at different levels of school absenteeism severity (i.e., 1+%, 3+%, 5+%, 10+%). Higher levels of absenteeism were also examined on an exploratory basis. Participants included 160 youth aged 6–19 years ($M = 13.7$; $SD = 2.9$) and their families from an outpatient therapy clinic (39.4%) and community (60.6%) setting, the latter from a family court and truancy diversion program cohort. One particular item relating to lack of enjoyment was most predictive of absenteeism severity at different levels, though not among the highest levels. Other internalizing items were also predictive of various levels of absenteeism severity, but only in a negatively endorsed fashion. Internalizing symptoms of worry and fatigue tended to be endorsed higher across less severe and more severe absenteeism severity levels. A general expectation that predictors would tend to be more homogeneous at higher than lower levels of absenteeism severity was not generally supported. The results help confirm the difficulty of conceptualizing this population based on forms of behavior but may support the need for early warning sign screening for youth at risk for school attendance problems.

Keywords: absenteeism severity, truancy, ensemble analysis, classification and regression tree analysis, youth internalizing, risk variables

INTRODUCTION

School attendance problems are a worldwide phenomenon linked to a plethora of academic, social, and physical and mental health problems in children and adolescents (Kearney et al., 2019a,b). Factors that elevate risk of school attendance problems are myriad as well and are often grouped into child-, parent-, family-, peer-, school-, and community-based variables (e.g., Havik et al., 2015). Child-based risk factors of school attendance problems include extensive work hours outside of school, grade retention, office disciplinary referrals, low school commitment and engagement, poor health or academic proficiency, problematic interpersonal relationships, substance use, and

underdeveloped social and academic skills, among others (Kearney, 2008; Ekstrand, 2015; Gubbels et al., 2019). Other child-based risk factors of school attendance and academic achievement problems, as well as later school dropout, have involved various psychopathological conditions and symptoms (Macklem, 2014; Parr and Bonitz, 2015; Kearney, 2016).

School attendance problems have been linked historically to a variety of internalizing and externalizing behavior problems and disorders, most notably anxiety and mood disorders and disruptive behavior disorders (Kearney and Albano, 2004; Jones et al., 2019). Internalizing problems common to this population include general, social, and separation anxiety as well as worry, fear, depression, somatic complaints, fatigue, social withdrawal, sleep disturbance, and self-consciousness (Egger et al., 2003; Maynard et al., 2015; González et al., 2019). Externalizing problems common to this population include non-compliance, defiance, verbal and physical aggression, temper tantrums, refusal to move, running away from school or home, and antisocial and disruptive behavior at school and elsewhere (Ingul et al., 2012; Kearney, 2019). In addition, internalizing and externalizing problems are highly comorbid within and across each set in this population (Hankin et al., 2016; Finning et al., 2019).

In recent years, researchers have endeavored to move toward more detailed, nuanced, and sophisticated profiles of psychopathology in youth with school attendance problems, particularly with respect to internalizing behaviors and their treatment (Ek and Eriksson, 2013; Crawley et al., 2014; Fiorilli et al., 2017; Maynard et al., 2018). For example, researchers have found that depression and less prosocial behaviors are often primary features of anxious youth with school attendance problems (Pflug and Schneider, 2016; Sibeoni et al., 2018; Tekin et al., 2018). In addition, others have associated school attendance problems linked with internalizing behaviors to key profiles surrounding optimism/pessimism, positive/negative affect, social functioning, and anxiety severity (González et al., 2016, 2019; Fernández-Sogorb et al., 2018; Sanmartín et al., 2018).

Researchers have also endeavored to link specific psychopathological symptoms to various levels of school absenteeism severity. For example, Lawrence et al. (2019) found that students with a mental disorder displayed less school attendance than students without a mental disorder, missing 11.8 school days in years 1–6, 23.1 days in years 7–10, and 25.8 days in years 11–12. In addition, for those students with a mental disorder, absences due to a particular disorder accounted for 13.4% of all days absent from school (rising to 16.6% in years 11–12). Skedgell and Kearney (2016) also examined internalizing symptoms among youth with 0–14% and 15–100% absenteeism severity, finding the latter group (and particularly those at 20–39%) to display significantly more general and separation anxiety and depression. Stempel et al. (2017) similarly compared youth who had missed less than versus more than 15 days of school, finding that more chronic absenteeism was associated with more adverse childhood experiences such as financial hardship, divorce, parental incarceration, domestic or neighborhood violence, and family mental disorder or substance use.

A link between specific psychopathological symptoms and other risk factors with various levels of school absenteeism

severity has important potential implications beyond basic research and classification. Certainly such a link can inform medical and mental health professionals who address youth with school attendance problems, and assessment and intervention protocols can be variously adapted to cases of mild/moderate versus chronic/severe absenteeism (Heyne et al., 2002; Kearney and Albano, 2018). Many school-based professionals and districts also distinguish between students with less severe and more severe academic and behavioral problems as they work to optimize limited intervention resources (McIntosh et al., 2010; August et al., 2018). Indeed, many schools have been forced to take on the role of mental health care and have thus sought out ways to screen for various mental health problems (Merikangas et al., 2011; Stiffler and Dever, 2015). Suggestions for what mental health symptoms relate to various levels of absenteeism severity would, for example, be helpful in this regard (Dowdy et al., 2015).

The need for more informed mental health screening in schools dovetails nicely with recent theoretical frameworks of school attendance problems that focus in part on multi-tiered interventions. Many school districts have adopted multi-tiered systems of support (MTSS) models for prevention and intervention of mental health concerns (Splett et al., 2018). MTSS models typically focus on prevention (Tier 1), early intervention for emerging, acute, or mild to moderate problems (Tier 2), and intensive intervention for chronic and severe problems (Tier 3) (Eagle et al., 2015). MTSS models can apply to a wide variety of academic, social, and behavioral problems, including those with internalizing behavior problems (Weist et al., 2018).

Kearney and Graczyk (2014) and Kearney (2016) were the first to apply MTSS principles to school attendance problems. In this model, Tier 1 strategies focus on enhancing functioning and schoolwide attendance and on preventing school attendance problems for all students, Tier 2 strategies focus on students with emerging, acute, or mild to moderate school attendance problems, often to reintegrate them to school, and Tier 3 strategies focus on students with chronic and severe school attendance problems, often to provide alternative pathways to graduation. Specific interventions may be matched to each tier based on absenteeism severity and degree of risk and contextual factors to help school personnel and others identify individualized responses (Freeman et al., 2016; Kearney, 2016; Elliott and Place, 2019).

As mentioned, MTSS models are increasingly adapted to a wide variety of academic, social, and behavioral problems, including now school attendance problems. A particular challenge for advocates of these models, however, has been to demarcate tiers within the system. A distinction between Tier 1 and Tier 2, for example, indicates a distinction between less problematic and more problematic behavior such as school absenteeism (Pullen and Kennedy, 2019). Unfortunately, no consensus distinction currently exists in this regard (Lyon and Cotler, 2007; Spruyt et al., 2016; Chu et al., 2018). In addition, distinctions between Tier 2 and Tier 3 remain variable. School attendance problems are sometimes considered to be chronic and severe (Tier 3) at a 10% threshold (DePaoli et al., 2015). Skedgell and Kearney (2016, 2018) found that risk factors for higher severity levels of absenteeism tended to be more

homogeneous than risk factors at lower levels of absenteeism. However, data to support a Tier 2-Tier 3 distinction remain needed (Conry and Richards, 2018).

The present study aimed to identify potential internalizing symptom risk factors among youth at different levels of school absenteeism severity (i.e., 1+%, 3+%, 5+%, 10+%). Such differentiations might help inform distinctions between tiers in an MTSS model of school absenteeism. In accordance with recent calls to employ machine learning-based methods to examine risk factors for school absenteeism (Chung and Lee, 2019; Sansone, 2019), two sets of statistical approaches were utilized. Ensemble analysis, including chi-square adjusted interaction detection (CHAID), support vector machines, and neural network analyses, is a non-parametric method that combines multiple algorithmic models or classifiers to produce a single best model for a given data set (Berk, 2006). In addition, classification and regression tree (CART) analysis is a non-parametric method that identifies comprehensive subgroups based on interactions among multiple risk factors or predictor variables (Lemon et al., 2003). These analyses are aimed to generate and not test hypotheses (Markham et al., 2013). Various levels of school absenteeism were examined, with a general expectation that risk factors at higher levels of absenteeism would be more homogeneous than risk factors at lower levels of absenteeism.

MATERIALS AND METHODS

Participants

Participants included 160 youth aged 6–19 years ($M = 13.7$; $SD = 2.9$) and their families from an outpatient therapy clinic (39.4%) and community (60.6%) setting in southern Nevada, the latter from a family court and truancy diversion program cohort. The clinic cohort involved students referred to therapy services for absenteeism; the community cohort involved students given a truancy citation by school police for absenteeism and referred to an 8-week diversion program. Participants were primarily male (51.2%) and diverse with respect to ethnicity: Hispanic (51.0%), European-American (26.1%), Asian (8.9%), African American (6.4%), multiracial or biracial (4.5%), and other (2.5%). Most parents were married (44.6%); others were divorced (22.3%), separated (18.5%), never married (12.7%), or had another status (1.9%). Most fathers (48.0%) and mothers (59.9%) graduated high school. Participants missed a mean of 19.0% days of school ($SD = 16.9$) at time of assessment. Some youths were referred for treatment for school refusal behaviors (e.g., distress at school, morning misbehaviors designed to miss school, skipped classes, and tardiness) that did not include formal absences.

Measures

The Revised Children's Anxiety and Depression Scale (RCADS; Chorpita et al., 2000) is a 47-item self-report or parent-report measure of child internalizing behavior disorders with the following subscales and number of items: separation anxiety (7), social phobia (9), generalized anxiety (6), obsessive-compulsive (6), panic disorder (9), and major depression (10). Items are scored on a Likert-type 0–3 scale of agreement (never = 0,

sometimes = 1, often = 2, always = 3). Internal consistency is good for each subscale, with Cronbach's alpha between 0.78–0.88 (Chorpita et al., 2005). Cronbach's alpha for RCADS items in the present study was 0.86. Confirmatory factor analysis indicated the 6-factor model is an adequate fit, with loadings from 0.51–0.79 (Chorpita et al., 2005).

School staff or parents provided absenteeism severity data in the form of number of full school days missed. Percentage of full school days missed was calculated by dividing the student's total number of full school days missed by the number of days of school in that academic year, at the time of assessment, and then multiplying that number by 100. Assessments were conducted at different points throughout the academic year.

Procedure and Data Analyses

Participants were recruited from a specialized outpatient therapy clinic or community setting. Participants in the community setting were referred to family court or a truancy diversion program by their school or parent(s)/guardian(s) based on prior school absences. Following parent consent and child assent, measures that included the RCADS were administered to youth and their parent(s)/guardian(s) independently and in the presence of a research assistant. Spanish versions of the measures were available.

Ensemble analysis was utilized to identify potential family environment risk factors among youth with school attendance problems across different levels of school absenteeism. Ensemble analysis is the combination of multiple algorithmic models or classifiers to produce one, best model that can be applied to the data (Berk, 2006). These models have been shown to outperform standard parametric methods, primarily due to the automation of identifying interactions and non-linearities and the reduction of overestimations of a model's predictive ability (Rosellini et al., 2018). Ensemble analysis can include many different statistical methods; the present study utilized CHAID decision trees, support vector machines, and neural network analyses. Predictors were examined collectively and independently. A multiple imputation method was utilized; different plausible imputed data sets were examined and combined results were obtained and reported here. Confusion matrices supported the use of CHAID decision trees. In addition, CART analyses were utilized to more specifically examine clusters of RCADS items associated with enhanced risk for a particular level of absenteeism severity (i.e., 1+%, 3+%, 5+%, 10+%). Other absenteeism levels were examined on an exploratory basis (i.e., 15+%, 20+%, 30+%, 40+%), as was latent class analysis for 0–10% and 10+% absenteeism. For brevity, significant results are reported. No gender differences were found with respect to RCADS Anxiety and Depression T-scores.

RESULTS

Absenteeism: 1+%

For the CHAID analysis, the final collective tree-model that best differentiated youth with 1+% absenteeism from youth with <1% absenteeism correctly identified 99.6% of participants and

identified one main risk factor: item 6 (nothing fun anymore; DEP). Item 6 scores of >0.0 indicated higher risk of 1+% absenteeism (69.3%); item 6 scores of 0.0 indicated lower risk (30.7%). The tree-model demonstrated higher sensitivity than specificity. Independent analysis revealed no significant predictors. CART item analysis similarly identified one subgroup at highest risk for 1+% absenteeism (node at 100.0%): endorsement of sometimes, often, or always on item 6 and endorsement of never on item 46 (scared if away from home overnight; SEP). The overall tree-model's accuracy in predicting 1+% absenteeism was approximately 95.7%.

Absenteeism: 3+%

For the CHAID analysis, the final collective tree-model that best differentiated youth with 3+% absenteeism from youth with $<3\%$ absenteeism correctly identified 83.7% of participants and identified one main risk factor: item 6 (nothing fun anymore; DEP). Item 6 scores of >0.0 indicated higher risk of 3+% absenteeism (53.4%); item 6 scores of 0.0 indicated lower risk (46.6%). The tree-model demonstrated higher sensitivity than specificity. Independent analysis of the predictors revealed that item 6 ($p < 0.01$, $F = 12.19$) and item 35 scores ($p < 0.01$, $F = 7.81$) significantly predicted 3+% absenteeism. With respect to item 35 (worry about what will happen; GAD), scores of 0.0 indicated higher risk (59.0%); scores of >0.0 indicated lower risk (41.0%). CART item analysis identified one main subgroup at highest risk for 3+% absenteeism (node at 100.0%): endorsement of sometimes, often, or always on items 6 (nothing fun anymore; DEP) and 38 (afraid to talk in front of class; SOP) as well as endorsement of never or sometimes on item 46 (scared if away from home overnight; SEP). The overall tree-model's accuracy in predicting 3+% absenteeism was approximately 92.1%.

Absenteeism: 5+%

For the CHAID analysis, the final collective tree-model that best differentiated youth with 5+% absenteeism from youth with $<5\%$ absenteeism correctly identified 76.7% of participants and identified one main risk factor: item 6 (nothing fun anymore; DEP). Item 6 scores of >0.0 indicated higher risk of 5+% absenteeism (53.4%); item 6 scores of 0.0 indicated lower risk (46.6%). The tree-model demonstrated higher sensitivity than specificity. Independent analysis of the predictors revealed that item 6 ($p < 0.01$, $F = 12.19$), 35 ($p < 0.05$, $F = 6.30$) and 38 scores ($p < 0.05$, $F = 6.81$) significantly predicted 5+% absenteeism. With respect to item 35 (worry about what will happen; GAD), scores of 0.0 indicated higher risk (59.0%); scores of >0.0 indicated lower risk (41.0%). With respect to item 38 (afraid to talk in front of class; SOP), scores of 0.0 indicated higher risk (61.3%); scores of >0.0 indicated lower risk (38.7%).

Classification and regression tree item analysis identified one main subgroup at highest risk for 5+% absenteeism (node at 100.0%): endorsement of never on item 17 (scared to sleep on own; SEP) and often or always on item 24 (with a problem, heart beats fast; PAN). The overall tree-model's accuracy in predicting 5+% absenteeism was approximately 84.9%. Latent class analysis of $<10\%$ absenteeism revealed a primary cluster that contained 41% of cases. In this cluster, RCADS items 1–4, 7, 12, 13, 21, 25,

and 30 (3 DEP, 2 GAD, 2 SOP, 1 PAN) were primarily endorsed as sometimes; all other items in this cluster were endorsed as never.

Absenteeism: 10+%

For the CHAID analysis, the final collective tree-model that best differentiated youth with 10+% absenteeism from youth with $<10\%$ absenteeism correctly identified 58.5% of participants and identified one main risk factor: item 6 (nothing fun anymore; DEP). Item 6 scores of >0.0 indicated higher risk of 1+% absenteeism (52.3%); item 6 scores of 0.0 indicated lower risk (47.7%). The tree-model demonstrated higher sensitivity than specificity. Independent analysis of the predictors revealed that obsession/compulsions T-scores significantly predicted 10% of days missed ($p < 0.01$, $F = 12.38$). Obsession/compulsions T-scores of ≤ 48.0 indicated higher risk of 10+% absenteeism (57.8%); obsession/compulsions T-scores of >48.0 indicated lower risk (42.2%). In addition, endorsement of never on several items was also predictive of 10+% absenteeism: items 8 (worried when someone angry at me; SOP; 65.3%/34.7%), 9 (worry about being away from parents; SEP; 68.4%/31.6%), 29 (feel worthless; DEP; 66.7%/33.3%), 30 (worry about making mistakes; SOP; 67.6%/32.4%), 42 (have to do things over and over; OCD; 61.5%/38.5%), and 44 (have to do things in just the right way; 54.9%/46.1%).

Classification and regression tree item analysis identified one main subgroup at highest risk for 10+% absenteeism (node at 85.6%): endorsement of never on item 17 (scared to sleep on own; SEP). The overall tree-model's accuracy in predicting 10+% absenteeism was approximately 84.2%. Latent class analysis of 10+% absenteeism revealed a primary cluster that contained 34% of cases. In this cluster, RCADS items 1, 4, 8, 21, and 30 (3 SOP, 1 DEP, 1 GAD) were primarily endorsed as sometimes; all other items in this cluster were endorsed as never.

Absenteeism: Higher Levels

Chi-square adjusted interaction detection analyses were also conducted on an exploratory basis for absenteeism levels of 15+%, 20+%, 30+%, and 40+%. The final collective tree-model that best differentiated youth with 15+% absenteeism from youth with $<15\%$ absenteeism correctly identified 52.9% of participants and identified one main risk factor: item 6 (nothing fun anymore; DEP). Item 6 scores of >0.0 indicated higher risk of 15+% absenteeism (52.3%); item 6 scores of 0.0 indicated lower risk (47.7%). The tree-model demonstrated higher specificity than sensitivity. Independent analysis revealed no subscale scores to be significant predictors of 15+% absenteeism. In addition, endorsement of never on several items was also predictive of 15+% absenteeism: items 1 (worry about things; GAD; 60.9%/39.1%), 8 (worried when someone angry at me; SOP; 65.3%/34.7%), 9 (worry about being away from parents; SEP; 68.4%/31.5%), 25 (cannot think clearly; DEP; 66.9%/33.1%), and 29 (feel worthless; DEP; 66.7%/33.3%).

The final collective tree-model that best differentiated youth with 20+% absenteeism from youth with $<20\%$ absenteeism correctly identified 61.4% of participants and identified one main risk factor: item 6 (nothing fun anymore; DEP). Item 6 scores of >0.0 indicated higher risk of 1+% absenteeism (52.3%); item

6 scores of 0.0 indicated lower risk (47.7%). The tree-model demonstrated higher specificity than sensitivity. Independent analysis of the predictors revealed that item 42 significantly predicted 20+% absenteeism ($p < 0.05$, $F = 6.58$). Item 42 (have to do things over and over; OCD) scores of 0.0 indicated higher risk for 20+% absenteeism (61.5%); item 42 scores of >0.0 indicated lower risk (38.5%).

The final collective tree-model that best differentiated youth with 30+% absenteeism from youth with $<30\%$ absenteeism correctly identified 75.3% of participants and identified two main risk factors: item 8 (worried when someone angry at me; SOP) and separation anxiety subscale scores. Item 8 scores of >0.0 indicated higher risk of 30+% absenteeism (64.9%); item 8 scores of 0.0 indicated lower risk (35.1%). Separation anxiety T-scores of ≤ 61.0 indicated higher risk of 30+% absenteeism (53.1%); separation anxiety T-scores of >61.0 indicated lower risk (46.9%). The tree-model demonstrated higher specificity than sensitivity.

The final collective tree-model that best differentiated youth with 40+% absenteeism from youth with $<40\%$ absenteeism correctly identified 83.9% of participants and identified one main risk factor: item 28 (with a problem, feel shaky; PAN). Item 28 scores of 0.0 indicated higher risk of 40+% absenteeism (50.6%); item 28 scores of >0.0 indicated lower risk (49.4%). The tree-model demonstrated higher specificity than sensitivity.

DISCUSSION

The present study examined internalizing behaviors as potential predictors of various absenteeism severity levels. The findings revealed that one particular depression item (nothing much fun anymore) helped most to demarcate different severity levels, up to a point. In addition, a number of other internalizing items were predictive of various levels of absenteeism severity, but only in a negatively endorsed fashion. Overall, internalizing items that tended to be endorsed higher across less severe and more severe absenteeism severity levels included those relating to worry and fatigue. A general expectation that predictors would tend to be more homogeneous at higher than lower levels of absenteeism severity was not generally supported.

One particular item was found to consistently distinguish lower and higher levels of absenteeism severity at different benchmarks: item 6 (nothing is much fun anymore), which is an item on the RCADS depression subscale. Two general possibilities may exist for this finding. First, school attendance problems are indeed commonly associated with symptoms of depression, one of the rare consistent findings over several decades with respect to internalizing psychopathology in this population (Kearney, 1993; Egger et al., 2003; Gallé-Tessonneau et al., 2019). Depression is also commonly associated or comorbid with anxiety disorders in this population, making attempts at diagnostic classification difficult (Jones and Suveg, 2015). Antidepressant medication is recommended for many adolescents with school attendance problems, and cognitive-behavioral therapies for this population often focus on depression symptoms (Maynard et al., 2015; Londono Tobon et al., 2018; Melvin and Gordon, 2019).

Finning et al. (2019), in their meta-analysis of depression and school attendance problems, concluded that symptoms of depression are indeed common to many different types of school attendance problems. The authors also postulated several possible mechanisms for this association, such as social withdrawal, sleep disturbance, and low energy. Youth with school refusal behavior do tend to have social functioning problems and withdraw from friends and other peers at school (Havik et al., 2015; González et al., 2019). Others indeed show difficulties with sleep (including going to bed very late), energy, and physical activity (Ek and Eriksson, 2013; Hochadel et al., 2014; Mannino et al., 2019). However, each set of behaviors – social and sleep problems and school attendance problems – may precede the other in different cases (Kearney, 2019).

Second, the depression item noted above may also indicate a relative amount of boredom, frustration, burnout, or lack of self-efficacy with respect to the school environment or academic performance (Fiorilli et al., 2017). Finning et al. (2019) noted that another mechanism explaining depression and school attendance problems might be loss of motivation. Surveys of youth with school attendance problems or who have dropped out of school regularly reveal boredom with classes and the school environment as a key reason for leaving (Strand, 2014; Attwood and Croll, 2015; Kearney, 2016). Others have noted as well that youth with learning disorders can become frustrated and eventually miss school (Redmond and Hosp, 2008). Poor school climate or school-based curricula perceived as tedious or inflexible by students are associated with school attendance problems as well (Hendron and Kearney, 2016; Maxwell, 2016; Wang and Degol, 2016). Interestingly, the finding regarding item 6 disappeared at particularly high levels of absenteeism severity (i.e., 30+% and 40+%), possibly suggesting that some youth discovered outside-of-school avenues to boost enjoyment (Kearney and Albano, 2018).

A key finding of the present study was that lack of endorsement of several anxiety items was what most predicted higher absenteeism severity levels. The findings also indicated substantial variability with respect to individual items. One possibility is that higher absenteeism severity levels are associated more with externalizing than internalizing symptoms (Maynard et al., 2012). In addition, youth in the present study were examined at different points of the academic year, but anxiety levels may be more pronounced at the beginning of a year (Ingul and Nordahl, 2013). Higher levels of absenteeism severity also mean more time out of school and thus relief from school-based anxiety symptoms (Skedgell and Kearney, 2018). Other variables such as family or school environment may thus be better predictors of absenteeism severity (Fornander and Kearney, 2019).

The lack of endorsement and variability shown in the present study may also help confirm that reliance on various forms of specific behavior to identify classes of school attendance problems is quite difficult (Inglés et al., 2015). Kearney (2002) advocated for the term negative affectivity rather than specific symptoms of anxiety or depression among youth with school attendance problems to account for the vagaries of internalizing symptoms characteristic of this population. Indeed, historically,

many researchers have focused on broad descriptors of emotional distress (e.g., dread, upset, misery) to describe youth who are reluctant to attend school (Kearney, 2001). Perhaps not surprisingly, the items that tended to be elevated more in the current study were those related to broader concepts such as worry and fatigue. Others have found considerable heterogeneity within and across classes of behavior among children with school attendance problems, and Kearney (2007) found that functions of school refusal behavior were superior to forms of behavior in predicting absenteeism severity.

Limitations of the present study should be noted. First, the sample was an eclectic one that ranged from having no formal school absences to having many school absences. Second, sample size constraints did not permit more nuanced analyses of absenteeism type, setting, or demographic or developmental differences, though studies generally indicate emotional distress across many absence types in this population (Finning et al., 2019). Third, the primary dependent measure was based on self-report, though these kinds of measures are commonly used for youth with internalizing symptoms (Chorpita et al., 2000). In related fashion, broader measures such as diagnostic interviews, behavioral observations, and parent and teacher reports were not used and may have provided more sophisticated information about participants' internalizing symptoms.

CONCLUSION

Despite these limitations, the present study may have some applicability to MTSS models of school absenteeism and how tiers within these models may be demarcated. Psychosocial screenings for anxiety and depression at early warning sign stages for problematic absenteeism may be advisable, and may

help distinguish Tier 1 school attendance from emerging Tier 2 school attendance problems (Ingul et al., 2019). Findings from the present study may further support the need for preventative practices in this population as well, particularly for targeted practices aimed toward those with depressive symptoms (Werner-Seidler et al., 2017).

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Ethics Committee of the University of Nevada, Las Vegas. Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

AUTHOR CONTRIBUTIONS

Both authors revised and approved the submitted version. MF helped to collect the data, performed the initial analyses, and assisted in writing the manuscript. CK helped with data analysis, assisted in writing the manuscript, and supervised the study.

FUNDING

This work was supported by the University of Nevada, Las Vegas.

REFERENCES

- Attwood, G., and Croll, P. (2015). Truancy and well-being among secondary school pupils in England. *Educ. Stud.* 41, 14–28. doi: 10.1080/03055698.2014.955725
- August, G. J., Piehler, T. F., and Miller, F. G. (2018). Getting “SMART” about implementing multi-tiered systems of support to promote school mental health. *J. Educ. Psychol.* 66, 85–96. doi: 10.1016/j.jsp.2017.10.001
- Berk, R. A. (2006). An introduction to ensemble methods for data analysis. *Soc. Methods Res.* 34, 263–295. doi: 10.1177/0049124105283119
- Chorpita, B. F., Moffitt, C. E., and Gray, J. (2005). Psychometric properties of the Revised Child Anxiety and Depression Scale in a clinical sample. *Behav. Res. Ther.* 43, 309–322. doi: 10.1016/j.brat.2004.02.004
- Chorpita, B. F., Yim, L., Moffitt, C., Umemoto, L. A., and Francis, S. E. (2000). Assessment of symptoms of DSM-IV anxiety and depression in children: a revised child anxiety and depression scale. *Behav. Res. Ther.* 38, 835–855. doi: 10.1016/S0005-7967(99)00130-8
- Chu, B. C., Guarino, D., Mele, C., O'Connell, J., and Coto, P. (2018). Developing an online early detection system for school attendance problems: results from a research-community partnership. *Cogn. Behav. Pract.* 26, 35–45. doi: 10.1016/j.cbpra.2018.09.001
- Chung, J. Y., and Lee, S. (2019). Dropout early warning systems for high school students using machine learning. *Child Youth Serv. Rev.* 96, 346–353. doi: 10.1016/j.chldyouth.2018.11.030
- Conry, J. M., and Richards, M. P. (2018). The severity of state truancy policies and chronic absenteeism. *J. Educ. Stud. Placed Risk* 23, 187–203. doi: 10.1080/10824669.2018.1439752
- Crawley, S. A., Caporino, N. E., Birmaher, B., Ginsburg, G., Piacentini, J., Albano, A. M., et al. (2014). Somatic complaints in anxious youth. *Child Psychiatry Hum. Dev.* 45, 398–407. doi: 10.1007/s10578-013-0410-x
- DePaoli, J. L., Fox, J. H., Ingram, E. S., Maushard, M., Bridgeland, J. M., and Balfanz, R. (2015). *Building A Grad Nation: Progress and Challenge in Ending the High School Dropout Epidemic. Annual Update 2015*. Washington, D.C: Civic Enterprises.
- Dowdy, E., Furlong, M., Raines, T. C., Boverly, B., Kauffman, B., Kamphaus, R. W., et al. (2015). Enhancing school-based mental health services with a preventive and promotive approach to universal screening for complete mental health. *J. Educ. Psychol. Consult.* 25, 178–197. doi: 10.1080/10474412.2014.929951
- Eagle, J. W., Dowd-Eagle, S. E., Snyder, A., and Holtzman, E. G. (2015). Implementing a multi-tiered system of support (MTSS): collaboration between school psychologists and administrators to promote systems-level change. *J. Educ. Psychol. Consult.* 25, 160–177. doi: 10.1080/10474412.2014.929960
- Egger, H. L., Costello, E. J., and Angold, A. (2003). School refusal and psychiatric disorders: a community study. *J. Am. Acad. Child Adolesc. Psychiatry* 42, 797–807. doi: 10.1097/01.CHI.0000046865.56865.79
- Ek, H., and Eriksson, R. (2013). Psychological factors behind truancy, school phobia, and school refusal: a literature study. *Child Fam. Behav. Ther.* 35, 228–248. doi: 10.1080/07317107.2013.818899
- Ekstrand, B. (2015). What it takes to keep children in school: a research review. *Educ. Rev.* 67, 459–482. doi: 10.1080/00131911.2015.1008406
- Elliott, J. G., and Place, M. (2019). School refusal: developments in conceptualisation and treatment since 2000. *J. Child Psychol. Psychiatry* 60, 4–15. doi: 10.1111/jcpp.12848

- Fernández-Sogorb, A., Inglés, C. J., Sanmartín, R., González, C., and Vicent, M. (2018). Validation of the Visual Analogue Scale for Anxiety-Revised and school refusal across anxiety profiles. *Int. J. Clin. Health Psychol.* 18, 264–272. doi: 10.1016/j.ijchp.2018.07.002
- Finning, K., Ukoumunne, O. C., Ford, T., Danielson-Waters, E., Shaw, L., Romero De Jager, I., et al. (2019). Review: the association between anxiety and poor attendance at school – a systematic review. *Child Adolesc. Ment. Health* 24, 205–216. doi: 10.1111/camh.12322
- Fiorilli, C., De Stasio, S., Di Chiacchio, C., Pepe, A., and Salmela-Aro, K. (2017). School burnout, depressive symptoms and engagement: their combined effect on student achievement. *Int. J. Educ. Res.* 84, 1–12. doi: 10.1016/j.ijer.2017.04.001
- Fornander, M. J., and Kearney, C. A. (2019). Family environment variables as predictors of school absenteeism severity at multiple levels: ensemble and classification and regression tree analysis. *Front. Psychol.* 10:2381. doi: 10.3389/fpsyg.2019.02381
- Freeman, J., Simonsen, B., McCoach, D. B., Sugai, G., Lombardi, A., and Horner, R. (2016). Relationship between school-wide positive behavior interventions and supports and academic, attendance, and behavior outcomes in high schools. *J. Posit. Behav. Interv.* 18, 41–51. doi: 10.1177/1098300715580992
- Gallé-Tessonneau, M., Johnsen, D. B., and Keppens, G. (2019). The relationship between mental health and school absenteeism in a community sample of French secondary school students: four profiles derived from cluster analysis. *Eur. J. Educ.* 12, 77–90. doi: 10.30552/ejep.v12i1.242
- González, C., Inglés, C. J., Kearney, C. A., Sanmartín, R., Vicent, M., and García-Fernández, J. M. (2019). Relationship between school refusal behavior and social functioning: a cluster analysis approach. *Eur. J. Dev. Psychol.* 12, 17–29. doi: 10.30552/ejep.v12i1.238
- González, C., Inglés, C. J., Kearney, C. A., Vicent, M., Sanmartín, R., and García-Fernández, J. M. (2016). School Refusal Assessment Scale-Revised: factorial invariance and latent means differences across gender and age in Spanish children. *Front. Psychol.* 7:2011. doi: 10.3389/fpsyg.2016.02011
- Gubbels, J., van der Put, C. E., and Assink, M. (2019). Risk factors for school absenteeism and dropout: a meta-analytic review. *J. Youth Adol.* 48, 1637–1667. doi: 10.1007/s10964-019-01072-5
- Hankin, B. L., Snyder, H. R., Gulley, L. D., Schweizer, T. H., Bijttebier, P., Nelis, S., et al. (2016). Understanding comorbidity among internalizing problems: integrating latent structural models of psychopathology and risk mechanisms. *Dev. Psychol.* 28, 987–1012. doi: 10.1017/S0954579416000663
- Havik, T., Bru, E., and Ertesvåg, S. K. (2015). Assessing reasons for school non-attendance. *Scand J. Educ. Res.* 59, 316–336. doi: 10.1080/00313831.2014.904424
- Hendron, M., and Kearney, C. A. (2016). School climate and student absenteeism and internalizing and externalizing behavioral problems. *Child. Sch.* 38, 109–116. doi: 10.1093/cs/cdw009
- Heyne, D., King, N. J., Tonge, B. J., Rollings, S., Young, D., Pritchard, M., et al. (2002). Evaluation of Child Therapy and Caregiver Training in the Treatment of School Refusal. *J. Am. Acad. Child Adolesc. Psychiatry* 41, 687–695. doi: 10.1097/00004583-200206000-00008
- Hochadel, J., Frölich, J., Wiater, A., Lehmkuhl, G., and Fricke-Oerkermann, L. (2014). Prevalence of sleep problems and relationship between sleep problems and school refusal behavior in school-aged children in children's and parents' ratings. *Psychopathology* 47, 119–126. doi: 10.1159/000345403
- Inglés, C. J., González, C., García-Fernández, J. M., Vicent, M., and Martínez-Montegudo, M. C. (2015). Current status of research on school refusal. *Eur. J. Dev. Psychol.* 8, 37–52. doi: 10.1016/j.ejeps.2015.10.005
- Ingul, J., and Nordahl, H. M. (2013). Anxiety as a risk factor for school absenteeism: what differentiates anxious school attenders from non-attenders? *Ann. Gen. Psychiatry* 12:25. doi: 10.1186/1744-859X-12-25
- Ingul, J. M., Havik, T., and Heyne, D. (2019). Emerging school refusal: a school-based framework for identifying early signs and risk factors. *Cogn. Behav. Pract.* 26, 46–62. doi: 10.1016/j.cbpra.2018.03.005
- Ingul, J. M., Klöckner, C. A., Silverman, W. K., and Nordahl, H. M. (2012). Adolescent school absenteeism: modelling social and individual risk factors. *Child Adol. Ment. H* 17, 93–100. doi: 10.1111/j.1475-3588.2011.00615.x
- Jones, A. M., and Suveg, C. (2015). Flying under the radar: school reluctance in anxious youth. *Sch. Ment. Health* 7, 212–223. doi: 10.1007/s12310-015-9148-x
- Jones, A. M., West, K. B., and Suveg, C. (2019). Anxiety in the school setting: a framework for evidence-based practice. *Sch. Ment. Health* 11, 4–14. doi: 10.1007/s12310-017-9235-2
- Kearney, C. A. (1993). Depression and school refusal behavior: a review with comments on classification and treatment. *J. Sch. Psychol.* 31, 267–279. doi: 10.1016/0022-4405(93)90010-G
- Kearney, C. A. (2001). *School Refusal Behavior in Youth: A Fundamental Approach to Assessment and Treatment*. Washington, DC: American Psychological Association.
- Kearney, C. A. (2002). Identifying the function of school refusal behavior: a revision of the School Refusal Assessment Scale. *J. Psychopathol. Behav. Assess.* 24, 235–245. doi: 10.1023/A:1020774932043
- Kearney, C. A. (2007). Forms and functions of school refusal behavior in youth: an empirical analysis of absenteeism severity. *J. Child. Psychol. Psychiatry* 48, 53–61. doi: 10.1111/j.1469-7610.2006.01634.x
- Kearney, C. A. (2008). An interdisciplinary model of school absenteeism in youth to inform professional practice and public policy. *Educ. Psychol. Rev.* 20, 257–282. doi: 10.1007/s10648-008-9078-3
- Kearney, C. A. (2016). *Managing School Absenteeism at Multiple Tiers: An Evidence-Based and Practical Guide for Professionals*. New York: Oxford University Press.
- Kearney, C. A. (2019). *Helping Families of Youth With School Attendance Problems: A Practical Guide for Mental Health and School-Based Professionals*. New York: Oxford.
- Kearney, C. A., and Albano, A. M. (2004). The functional profiles of school refusal behavior. *Behav. Modif.* 28, 147–161. doi: 10.1177/0145445503259263
- Kearney, C. A., and Albano, A. M. (2018). *When Children Refuse School: Therapist Guide*. New York, N.Y: Oxford University Press.
- Kearney, C. A., González, C., Graczyk, P., and Fornander, M. J. (2019a). Reconciling contemporary approaches to school attendance and school absenteeism: toward promotion and nimble response, global policy review and implementation, and future adaptability (Part 1). *Front. Psychol.* 10:2222. doi: 10.3389/fpsyg.2019.02222
- Kearney, C. A., González, C., Graczyk, P., and Fornander, M. J. (2019b). Reconciling contemporary approaches to school attendance and school absenteeism: toward promotion and nimble response, global policy review and implementation, and future adaptability (Part 2). *Front. Psychol.* 10:2605. doi: 10.3389/fpsyg.2019.02605
- Kearney, C. A., and Graczyk, P. (2014). A response to intervention model to promote school attendance and decrease school absenteeism. *Child Youth Care Forum* 43, 1–25. doi: 10.1007/s10566-013-9222-1
- Lawrence, D., Dawson, V., Houghton, S., Goodsell, B., and Sawyer, M. G. (2019). Impact of mental disorders on attendance at school. *Australas. J. Educ.* 63, 5–21. doi: 10.1177/0004944118823576
- Lemon, S., Roy, J., Clark, M., Friedmann, P., and Rakowski, W. (2003). Classification and regression tree analysis in public health: methodological review and comparison with logistic regression. *Ann. Behav. Med.* 26, 172–181. doi: 10.1207/s15324796abm2603_02
- Londono Tobon, A., Reed, M. O., Taylor, J. H., and Bloch, M. H. (2018). A systematic review of pharmacologic treatments for school refusal behavior. *J. Child Adol. Psychop.* 28, 368–378. doi: 10.1089/cap.2017.0160
- Lyon, A. R., and Cotler, S. (2007). Toward reduced bias and increased utility in the assessment of school refusal behavior: the case for diverse samples and evaluations of context. *Psychol. Sch.* 44, 551–565. doi: 10.1002/pits.20247
- Macklem, G. L. (2014). *Preventive Mental Health at School: Evidence-Based Services for Students*. Berlin: Springer. doi: 10.1007/978-1-4614-8609-1
- Mannino, G., Giunta, S., Montefiori, V., Tamanza, G., Iacolino, C., Novara, C., et al. (2019). Healthy lifestyle, well-being, physical activity, sport, and scholastic/academic performance: interactions and connections. *World Futures* 75, 462–479. doi: 10.1080/02604027.2019.1654772
- Markham, F., Young, M., and Doran, B. (2013). Detection of problem gambler subgroups using recursive partitioning. *Int. J. Ment. Health Addict.* 11, 281–291. doi: 10.1007/s11469-012-9408-z
- Maxwell, L. E. (2016). School building condition, social climate, student attendance and academic achievement: a mediation model. *J. Environ. Psychol.* 46, 206–216. doi: 10.1016/j.jenvp.2016.04.009

- Maynard, B. R., Brendel, K. E., Bulanda, J. J., Heyne, D., Thompson, A. M., Pigott, T. D., et al. (2015). Psychosocial interventions for school refusal with primary and secondary school students. *Am. J. Fam. Ther.* 23, 59–72. doi: 10.4073/csr.2015.12
- Maynard, B. R., Heyne, D., Brendel, K. E., Bulanda, J. J., Thompson, A. M., and Pigott, T. D. (2018). Treatment for school refusal among children and adolescents: a systematic review and meta-analysis. *Res. Soc. Work Pract.* 28, 4–15. doi: 10.1177/1049731515598619
- Maynard, B. R., Salas-Wright, C. P., Vaughn, M. G., and Peters, K. E. (2012). Who are truant youth? Examining distinctive profiles of truant youth using latent profile analysis. *J. Youth Adolesc.* 41, 1671–1684. doi: 10.1007/s10964-012-9788-1
- McIntosh, K., Bohanon, H., and Goodman, S. (2010). Toward true integration of response to intervention systems in academic and behavior support: part three: tier 3 support. *Communiqué* 39, 30–31.
- Melvin, G. A., and Gordon, M. S. (2019). Antidepressant Medication: is It a Viable and Valuable Adjunct to Cognitive-Behavioral Therapy for School Refusal? *Cogn. Behav. Pract.* 26, 107–118. doi: 10.1016/j.cbpra.2018.07.005
- Merikangas, K. R., He, J., Burstein, M., Swendsen, J., Avenevoli, S., Case, B., et al. (2011). Service utilization for lifetime mental disorders in US adolescents: results of the National Comorbidity Survey–Adolescent Supplement (NCS-A). *J. Am. Acad. Child Adolesc. Psychiatry* 50, 32–45. doi: 10.1016/j.jaac.2014.10.010
- Parr, A. K., and Bonitz, V. S. (2015). Role of family background, student behaviors, and school-related beliefs in predicting high school dropout. *J. Educ. Res.* 108, 504–514. doi: 10.1080/00220671.2014.917256
- Pflug, V., and Schneider, S. (2016). School absenteeism: an online survey via social networks. *Child Psychiatry Hum. Dev.* 47, 417–429. doi: 10.1007/s10578-015-0576-5
- Pullen, P. C., and Kennedy, M. J. (eds) (2019). *Handbook of Response to Intervention and Multi-tiered Systems of Support*. New York: Routledge.
- Redmond, S. M., and Hosp, J. L. (2008). Absenteeism rates in students receiving services for CDs, LDs, and EDs: a macroscopic view of the consequences of disability. *Lang. Speech Hear. Serv. Sch.* 39, 97–103. doi: 10.1044/0161-1461(2008/010)
- Rosellini, A. J., Dussaillant, F., Zubizarreta, J. R., Kessler, R. C., and Rose, S. (2018). Predicting posttraumatic stress disorder following a natural disaster. *J. Psychiatr. Res.* 96, 15–22. doi: 10.1016/j.jpsychires.2017.09.010
- Sanmartín, R., Inglés, C. J., González, C., Vicent, M., Ruiz-Esteban, C., and García-Fernández, J. M. (2018). Impact of affective profiles on school refusal in a Spanish sample of primary education. *J. Child Fam. Stud.* 27, 1349–1357. doi: 10.1007/s10826-017-0962-7
- Sansone, D. (2019). Beyond early warning indicators: high school dropout and machine learning. *Oxf. B Econ. Stat.* 81, 456–485. doi: 10.1111/obes.12277
- Sibeoni, J., Orri, M., Podlipski, M. A., Labey, M., Campredon, S., Gerardin, P., et al. (2018). The experience of psychiatric care of adolescents with anxiety-based school refusal and of their parents: a qualitative study. *J. Can. Acad. Child Adolesc. Psychiatry* 27, 39–49. doi: 10.1111/j.1744-6163.1999.tb00565.x
- Skedgell, K. K., and Kearney, C. A. (2016). Predictors of absenteeism severity in truant youth: a dimensional and categorical analysis. *Am. Sec. Educ.* 45, 46–58. doi: 10.1016/j.childyouth.2018.01.043
- Skedgell, K. K., and Kearney, C. A. (2018). Predictors of school absenteeism severity at multiple levels: a classification and regression tree analysis. *Child Youth Serv. Rev.* 86, 236–245. doi: 10.1016/j.childyouth.2018.01.043
- Splett, J. W., George, M. W., Zaheer, I., Weist, M. D., Evans, S. W., and Kern, L. (2018). Symptom profiles and mental health services received among referred adolescents. *Sch. Ment. Health* 10, 96–110. doi: 10.1007/s12310-017-9244-1
- Spruyt, B., Keppens, G., Kemper, R., and Bradt, L. (2016). ‘If only they had a file on every pupil’: on the mismatch between truancy policy and practice in Flanders. *Int. J. Soc. Educ.* 26, 171–189. doi: 10.1080/09620214.2016.1191965
- Stempel, H., Cox-Martin, M., Bronsert, M., Dickinson, L. M., and Allison, M. A. (2017). Chronic school absenteeism and the role of adverse childhood experiences. *Acad. Pediatr.* 17, 837–843. doi: 10.1016/j.acap.2017.09.013
- Stiffler, M. C., and Dever, B. V. (2015). Mental Health Screening at School. *J. Sch. Health* 77, 53–58. doi: 10.1007/978-3-319-19171-3
- Strand, S. (2014). School effects and ethnic, gender and socio-economic gaps in educational achievement at age 11. *Oxf. Rev. Educ.* 40, 223–245. doi: 10.1080/03054985.2014.891980
- Tekin, I., Erden, S., Ayta, A. B. S., and Buyukoksuz, E. (2018). The predictors of school refusal: depression, anxiety, cognitive distortion and attachment. *J. Hum. Sci.* 15, 1519–1529. doi: 10.14687/jhs.v15i3.5084
- Wang, M. T., and Degol, J. L. (2016). School climate: a review of the construct, measurement, and impact on student outcomes. *Educ. Psychol. Rev.* 28, 315–352. doi: 10.1007/s10648-015-9319-1
- Weist, M. D., Eber, L., Horner, R., Splett, J., Putnam, R., Barrett, S., et al. (2018). Improving multitiered systems of support for students with “internalizing” emotional/behavioral problems. *J. Posit. Behav. Interv.* 20, 172–184. doi: 10.1177/1098300717753832
- Werner-Seidler, A., Perry, Y., Calear, A. L., Newby, J. M., and Christensen, H. (2017). School based depression and anxiety prevention programs for young people: a systematic review and meta-analysis. *Clin. Psychol. Rev.* 51, 30–47. doi: 10.1016/j.cpr.2016.10.005

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2020 Fornander and Kearney. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



A Change in the Frame: From Absenteeism to Attendance

Carolyn Gentle-Genitty^{1*}, James Taylor² and Corinne Renguet³
on behalf of the Student Researchers

¹ Office of the Executive Vice President for University Academic Affairs, Indiana University Purdue University Indianapolis, Indianapolis, IN, United States, ² Indiana University School of Social Work, Indiana University Purdue University Indianapolis, Indianapolis, IN, United States, ³ Technical Communication, Department of Technology Leadership and Communication, Indiana University Purdue University Indianapolis, Indianapolis, IN, United States

School attendance is important for student long-term academic and career success. However, in the U.S., our current practice often disenfranchises more at-risk students than it helps. Students slated for suspension and expulsion are often recipients of these practices. This manuscript offers a recommended change in how we frame student absenteeism and attendance using attendance markers and conceptual information by identifying the discrepancies, proposing options, and recommending a new way to actively leverage attendance data (not absenteeism data) for proactive student support. Particular attention is paid to how excused and unexcused absences and in-school suspensions are treated. An emerging pivot program, the *Evaluation and Support Program*, engages students while they receive school services, community support, and complete consequences is discussed as a possible, promising intervention.

OPEN ACCESS

Edited by:

Christopher Kearney,
University of Nevada, Las Vegas,
United States

Reviewed by:

Ricardo Sanmartín,
University of Alicante, Spain
Aitana Fernández-Sogorb,
University of Alicante, Spain

*Correspondence:

Carolyn Gentle-Genitty
cgentleg@iu.edu

Specialty section:

This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Education

Received: 31 July 2019

Accepted: 23 December 2019

Published: 21 January 2020

Citation:

Gentle-Genitty C, Taylor J and
Renguet C (2020) A Change in the
Frame: From Absenteeism to
Attendance. *Front. Educ.* 4:161.
doi: 10.3389/feduc.2019.00161

Keywords: attendance, absenteeism, expulsion, suspension, excused absences

INTRODUCTION

Failure to be present in the school environment can thwart development (Carroll, 2010) and seriously impair mental, cognitive, and socio-emotional outcomes (Kearney, 2008; Maynard et al., 2012; Heyne and Sauter, 2013; Gottfried, 2014) especially in the early schooling days. States have enacted legislation to guarantee that children in their formative years are properly educated to play a useful role in society (Gentle-Genitty et al., 2015). A discrepancy exists between the gray areas of the desire to educate children and the legal issues of the amount of education required. This discrepancy causes a struggle to define attendance and absenteeism for society, and more specifically, for teachers and attendance officers (Kearney, 2004).

The frames of how we currently look at these issues are focused on labels such as *absenteeism* and *truancy*. We can examine those frames more closely by starting with the changing definitions. For the purposes of this discussion, absenteeism is the study of the various forms or interplay of policies and procedures governing attendance ranging from presence to absence and all its corollary constituents, outcomes, interventions, and consequences (Gentle-Genitty et al., 2015; Heyne et al., 2018). Truancy is the label used for students who do not attend school when they are supposed to be attending, although there are nuances of what that looks like (see, ex. Gentle-Genitty, 2009; Maynard et al., 2012; Gentle-Genitty et al., 2015). Attendance is defined as the amalgamation of student behaviors, policies, procedures, and protocols used for capturing the formal presence or absence of a student in a registered school system by an official school officer or system (Gentle-Genitty et al., 2015). Because the field of school attendance and absenteeism is still emerging, recent efforts have focused not on attendance or absenteeism but instead on the complex relationships

students have with their schools and families (Keppens and Spruyt, 2017) and various iterations and categorization of school attendance problems (i.e., school refusal, truancy, school withdrawal, dropout...), resulting in no consensus on these efforts (Heyne et al., 2018). Further, challenges rest in the inconsistent use and lack of consensus of definitions, and the variations result not in new terms, but in a categorization of the same behaviors according to their persistence, severity, and or avoidance (Gentle-Genitty et al., 2015; Heyne et al., 2018).

Studies show that students who are engaged and see value in education are less likely to experience truancy (Gentle-Genitty, 2009). Students who have absences and tardies in one semester are more likely to have ongoing absences and tardies (Gottfried, 2017). Similarly, students who do not attend and who have classmates who do not attend have a correlation between the absences and their individual grades (Marbouti et al., 2018). Timing has also been shown to have an effect on attendance or lack thereof (Marbouti et al., 2018).

Schools have mechanisms and protocols for collecting data on student absenteeism. However, the literature shows that schools are not adequately evaluating the effectiveness of their procedures for collecting and validating attendance data, resulting in unintended consequences for the students, schools, and communities. This manuscript offers a recommended shift to the view of absenteeism and attendance and recommends ways to leverage attendance data for proactive student support. An intervention may disrupt trauma, connect students to supports, establish positive relationships, and provide pivot pathways to student success, thereby reducing rates of suspension and expulsion.

INTERVENTIONS

Interventions exist and have been contributing to the research in this area for a number of years (ex. Jenson et al., 2013). The *Ability School Engagement Program* (ASEP) mitigates risk factors for violence and anti-social behaviors (Cardwell et al., 2019). Another intervention included leadership binders and examined student attitudes toward school (Berlin, 2019).

Another recently proposed intervention, the Evaluation and Support Program (ESP), is an alternative to the expulsion and arrest method, placing the responsibility for re-engaging youth on the school and community. ESP is being used alongside a value system called CORE, which includes civility, order, respect, and excellence (CORE). This tiered method (Kearney, 2016) offers alternatives to the expulsion and arrest method and placing the responsibility for re-engaging the youth on the school and community prior to expulsion. The CORE-ESP intervention could begin changing the framing of absenteeism and includes workshops covering anger management, conflict resolution, drug education, and other similar topics and focuses on (1) priority evaluation and assessment with at least one parent, (2) treatment recommendations inclusive of education and therapy, and (3) at the end of completed tasks, a review hearing to evaluate educational placement. Interventions are focused on care and quality of life and can include the following:

- Anger Management, Academic Growth and Recovery, CORE Court, Community Service.
- Drug Education, Individual Counseling, Group Counseling, Mentoring.
- Truancy Intervention, Conflict Mediation, Restorative Justice.
- Apex Credit Recovery Pathway, Academic Reengagement, Career Builders & Parenting Workshops, Healing Hearts, Extended Day School.

The tiered model emphasizes a genuine concern and care for students by viewing the at-risk students as a member of the larger community and seeks viable alternatives to arrest and expulsion including

- Offer most interventions on school grounds to reduce unnecessary travel and cost.
- Use an Integrated System of Care framework to address the needs of the students and families while maintaining the safety of the learning environment.
- Decrease involvement of identified at-risk students into the juvenile justice system.
- Reduce out-of-school suspensions and disproportionality with school discipline to provide alternatives to arrest and expulsions through positive evidence-based school discipline practices.
- Ensure that when students are out of the classroom due to suspension or expulsion, a continuing education plan is in place and plans for adequate support and services are available upon re-entry.
- Reduce law enforcement referrals and arrests on school property, except where an arrest is necessary to protect the health and safety of the school community.
- Expand access to academic, mental health, and other community supports for students and their families.
- Increase academic success through implementing a plan toward social and academic re-engagement.

The impetus for this program was a decree by a local judge, which noted that the court perceived a pervasiveness in disenfranchising at-risk student populations. Disenfranchising can take many forms including the reporting structure for status offenses. The program goal is to strategically interrupt the school-to-prison pipeline through strong connections with community partnerships and by establishing a pre-screening consultant with the prosecutor's office. In addition, schools work with the local school hearing office to design parallel tracks and establish alternative pathways. This perspective takes an inclusive approach rather than the marginalized vs. mainstream approach currently held by most policy analysis frameworks.

RECOMMENDATIONS

Much research is needed in the area of addressing these complex issues. Reframing the beliefs and practices in the educational system is a place to start and can be founded on the belief that student bonds contribute to student success (Gentle-Genitty, 2009; Veenstra et al., 2010). For students who commit offenses that rise to the level of public safety concern and who experience

trauma, the most stable factor in their lives is often school. Establishing strong connections with community resources can help keep at-risk students in school. Without this reframing, at-risk students may continue to pivot away from school and rarely return or graduate—often reinforcing the school-to-prison pipeline. Reframing with an attendance focus instead of an absenteeism focus disrupts trauma, connects students and families to support, establishes positive relationships, and provides pivot pathways to success.

Multiple Attendance Markers

Multiple markers can be used to track and report attendance including teacher records, attendance officer reports, test-taking outcomes, suspensions (in- and out-of-school), expulsions, attendance percentages or percentiles, discipline behaviors, excused and unexcused absences, and the student's overall presence. Presence can be used to mark the student's attendance every day, every half-day, or by period. Period or half-day tracking more effectively captures patterns and attending behaviors (Keppens and Spruyt, 2017). As the field of absenteeism has grown, methods for tracking processes and interventions have also grown. Beyond simply tracking presence or physical attendance, current research also considers tracking processes, interventions, classifications, and categorizations. Through the evaluation and analysis of the mental/cognitive and socioemotional as well as the physical attendance of the child in determining patterns of school attendance, much more targeted and structured outcomes have come to light.

Heyne and Sauter (2013) and Kearney (2008) share concerns on school refusal and other psychological underpinnings from tracking more than just physical attendance. When focusing on increasing rates of attendance, including more data can aid schools in more accurately responding to students' needs by treating them as humans vs. as mere numbers or targets and emphasizing a cognitive behavioral approach coupled with a mental health approach to absence and presence (Klerman, 1988). This approach is ideal because it surfaces early manifestation of daily symptoms that often result in negative outcomes.

The tiered approach (Figure 1) divides students into three tiers reflecting the level of anticipated need for support (Kearney, 2016). Prevention, *Tier 1*, captures all students (those missing <5% are considered satisfactory, those missing 5–9% are considered at-risk). It reinforces value for attendance and provides structures for monitoring, clarifying, recognizing, educating, and establishing a culture of positive attendance. It is the universal prevention and education approach capturing 50–100% of students. This tier also includes the need to establish positive relationships with families. Early intervention is critical for success. Recognizing good and improved attendance, educating and engaging students and families about the importance of attendance, monitoring absences, and setting attendance goals helps establish a supportive and engaging school climate.

Tier 2 captures the 11–49% of students who have a history of absence (missing 10–19% of school) or who face a risk factor that makes attendance tenuous. These students need a higher level of

more individualized support in addition to the universal supports (Kearney, 2016). *Tier 2* involves building caring supportive relationships (such as first period teachers Success Mentors, foster care, transportation) with students and families to motivate daily attendance and address challenging barriers.

Tier 3, the highest level of need, often captures the top 10% of the population who require more intensive and individualized responses. Their chronic absence is at a threshold of missing 20% or more of school in the past year or during the first month of school and/or facing risk factors. These are the most vulnerable students facing serious hurdles, and they may be homeless, involved in foster care, or involved in the juvenile justice system.

Core-ESP Connect-Success Mentor Model

The CORE Connect-Success mentor model (Figure 2) includes success mentors (teachers) who are advocates and motivators and encourage their 1st period students (mentees) during CORE time to attend school every day (Kearney, 2016). Teachers track the attendance of their 1st period students and form a relationship that lends to academic success through the ethics of care. Other periods are responsible for taking attendance also; however, sharing information through an open systems process strengthens the cadence and increases accountability for tracking at-risk students.

School districts can reallocate funds to invest in preventative and diversion programs to allow schools to access prevention and provider dollars, create partnerships to apply for local juvenile diversion and school safety and research grant opportunities, and seek out other federal community and private funding. Director of Student Services meetings can be held with representatives from various agencies (Department of Education, Department of Child Services, law enforcement, etc.) to foster a consistent dialogue to allow everyone to develop better processes. The result is improvements in defragmented services by integrating care with other community organizations, assessment of the overall mental health status of school districts, and the establishment of clear lines of communication to create new and improved reciprocal partnerships between schools and the courts that are more responsive to the needs of schools.

Other outcomes from coordination can include:

- Partnering with higher learning institutions to develop and evaluate effective risk assessment tools aimed at determining the high-risk offenders.
- Recruitment of enthusiastic human capital and other district resources to foster a sense of internal support.
- Training of key personnel in Trauma Informed Care and Brain Science to create Trauma Informed Care Schools within the school districts.

It is necessary to create a positive reinforcement behavioral alternative approach to expulsion and arrest. Students need to know they may successfully return to their schools armed with a better understanding of the connection between their behavior at school and that of the community, and consequences associated with their actions.

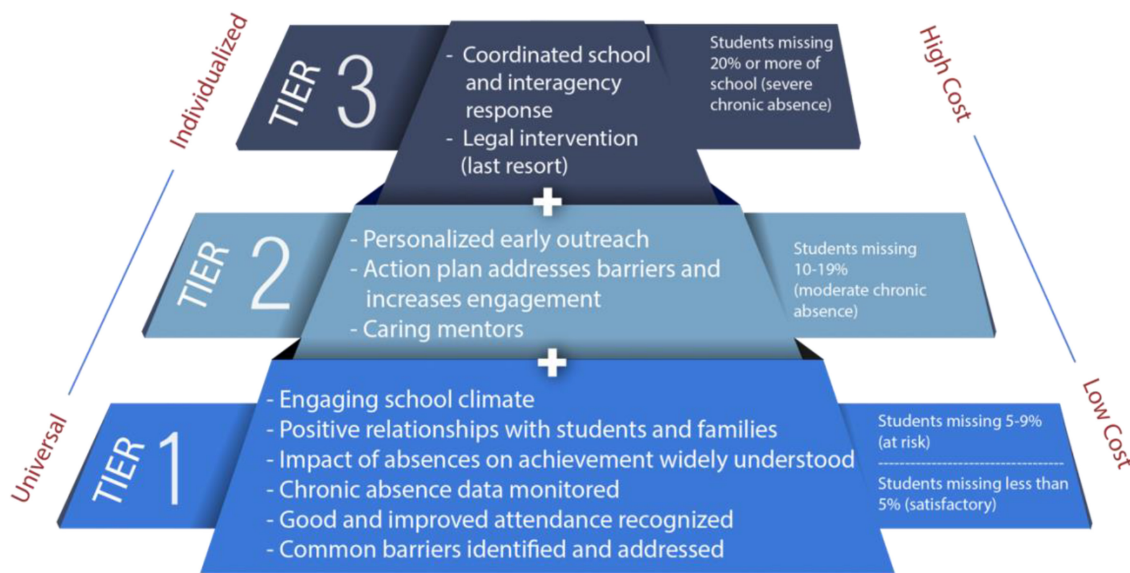


FIGURE 1 | Assessing levels of student need—Implementing a model of tiered intervention (Kearney, 2016; Used with permission from Attendance Works).

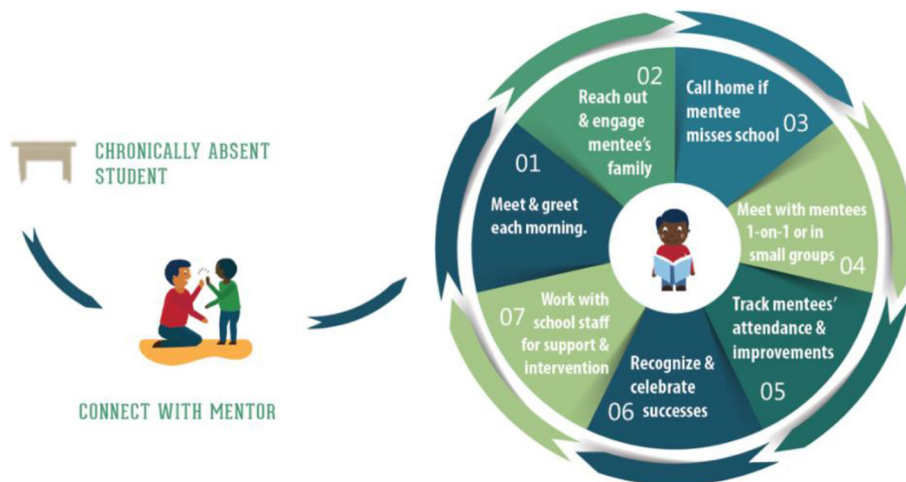


FIGURE 2 | Key elements of a CORE success mentor (Used with permission from Attendance Works).

DISCUSSION

Attendance-focused tracking can help to show care with immediate action for all involved, especially when the tiered levels of need and strategic responses are used. This focus on attendance instead of absenteeism may help foster a positive environment where students are better able to improve mental, cognitive, and socio-emotional outcomes (Gentle-Genitty, 2009; Heyne and Sauter, 2013; Gottfried, 2014, 2017).

Students and parents should understand policies, practices, and definitions (Kearney, 2004; Gentle-Genitty et al., 2015) to help them feel that the school cares. The child and their attendance should be celebrated, and a sense of school bond

fostered (Gentle-Genitty, 2008, 2009; Veenstra et al., 2010). This bond can be leveraged for the benefit of all in protecting and fostering safety. The same is true when schools are able to use tracking attendance to establish a strategic method of collecting daily period data to establish patterns of student behavior. This is a shift in thinking. Tracking attendance should be a complementary responsibility to the larger task of ensuring we value and appreciate those who do attend and allow for them to bond and value their schooling. Thus, teacher engagement and classroom modifications should be norms.

What must be done? Much future research is needed in these areas. More intervention programs must engage teachers to look more deeply at attendance and the idea of paying

attention to presence rather than absence. Teachers need to learn more about the contexts of their student absences. For example, why do students miss class when there is a substitute teacher? Are the students who are absent missing on specific days? For example, perhaps they are struggling and do not attend on days that include math classes. Do all the siblings in one family miss specific days because living situations cause late drop offs or missing the bus? We live in a schooling-dependent society where many parents work, and the school is the official place for their children to learn while they are gone. Students show up in the school environment every day and interact in complex relationships with teachers and administrators who are supposed to care, but often, few see what is really happening. The outcomes can lead to loneliness, suicide, bullying, and, sadly, school shootings. Students are being pushed to the edge simply because there is a stark change in patterns of behavior and engagement, and schools have no way to formally notify each other that something was off. More research in these areas and additional alternatives to attendance and engagement tracking may help.

Schools have not been effective focusing on absenteeism (Gentle-Genitty et al., 2015). Operationalizing attendance problems is not just the idea of excused and unexcused absences, as both are absences where the student is not ready and able to learn. It is about the same students being suspended repeatedly via in-school suspensions and marked absences. If the students are attending, regardless of the form, they must be counted as present. This factor alone will help us to gather more accurate data and decide which data is being tracked for patterns of behaviors and changes, and what actions we take with the data to protect all students and offer support to those most in need.

A tiered approach (Kearney, 2016) can help with school-wide interventions that benefit all and are individualized and intensified, working best in a culture of school attendance that values presence. This is a culture where typical factors of attendance are tracked and reported, discrepancies in what is

tracked and used are shared, and negative patterns are disrupted early. There is no sense in collecting information if it will not be used to help the students. Focusing on attendance saves money, helps students graduate, and ultimately helps schools play the roles they were meant to play as bridges between families and communities to prepare students for their roles as responsible citizens.

This work offers only a glimpse into reframing the absenteeism focus to a focus on attendance and discusses other unintended consequences of attendance issues, including the effects on at-risk students. This list of recommendations and outcomes is not exhaustive, but suggestive and intended to inspire and expand current ideas about what positive interventions and preventions could be implemented in other schools. All of this is done with the hope of changing the attendance paradigm from being punitive to being a trauma-informed care approach that fosters positivity and support for reengagement. Perhaps this manuscript can expand the conversation to continue this important work more broadly.

AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

FUNDING

This project and community partnership was made possible through countless agency and school collaborations and seed funds from the IUPUI Chancellor Bantz Community Fellowship Program. The Primary Author was the program's 2017 Community Research Scholar and grant recipient. In addition, support to capture the research work is attributed to IUPUI's Olaniyan Scholars—undergraduate researchers: Teresa Parker, Darius Adams, Timara Turman. Warren Township school staff, agency partners, and Prosecutor's Office, prosecutor Kristen Martin are also to be thanked.

REFERENCES

- Berlin, S. (2019). *Improving Student Attitudes Towards School Via the Implementation of Leadership Binders*. Master's Thesis, Goucher College School of Education, Baltimore, MD, United States.
- Cardwell, S. M., Mazerolle, L., and Piquero, A. R. (2019). Truancy intervention and violent offending: evidence from a randomized controlled trial. *Aggress. Violent Behav.* 49:101308. doi: 10.1016/j.avb.2019.07.003
- Carroll, H. C. M. (2010). The effect of pupil absenteeism on literacy and numeracy in the primary school. *Sch. Psychol. Int.* 31, 115–131. doi: 10.1177/0143034310361674
- Gentle-Genitty, C. (2008). *Chronic Truancy and Social Bonding: Role of Schools*. Las Vegas, NV: International Association for Truancy and Dropout Prevention.
- Gentle-Genitty, C. (2009). *Tracking More Than Absences: Impact of School's Social Bonding on Chronic Truancy*. Latvia: Lambert Academic Publishing. doi: 10.1037/e625252012-001
- Gentle-Genitty, C., Karikari, I., Chen, H., Wilka, E., and Kim, J. (2015). Truancy: a look at definitions in the USA and other territories. *Educ. Stud.* 41, 62–90. doi: 10.1080/03055698.2014.955734
- Gottfried, M. A. (2014). Chronic absenteeism and its effects on students' academic and socioemotional outcomes. *J. Educ. Stud. Risk* 19, 53–75. doi: 10.1080/10824669.2014.962696
- Gottfried, M. A. (2017). Does truancy beget truancy?: evidence from elementary school. *Elem. Sch. J.* 118, 128–148. doi: 10.1086/692938
- Heyne, D., Gren-Landell, M., Melvin, G., and Gentle-Genitty, C. (2018). Differentiation between school attendance problems: why and how? *Cogn. Behav. Pract.* 26, 8–34. doi: 10.1016/j.cbpra.2018.03.006
- Heyne, D., and Sauter, F. M. (2013). "School refusal," in *The Wiley-Blackwell Handbook of the Treatment of Childhood and Adolescent Anxiety*, eds C. A. Essau and T. H. Ollendick (Chichester, NM: Wiley), 471–517. doi: 10.1002/9781118315088.ch21
- Jenson, W. R., Sprick, R., Sprick, J., Majszak, H., and Phosaly, L. (2013). *Absenteeism and Truancy: Interventions and Universal Procedures*. Eugene, OR: Ancora Publishing.
- Kearney, C. A. (2004). "Absenteeism," in *Encyclopedia of School Psychology*, eds T. S. Watson and C. H. Skinner (New York, NY: Kluwer Academic/Plenum), 1–2.
- Kearney, C. A. (2008). An interdisciplinary model of school absenteeism in youth to inform professional practice and public policy. *Educ. Psychol. Rev.* 20, 257–282. doi: 10.1007/s10648-008-9078-3

- Kearney, C. A. (2016). *Managing School Absenteeism at Multiple Tiers. An Evidence-Based and Practical Guide for Professionals*. New York, NY: Oxford University Press. doi: 10.1093/med:psych/9780199985296.001.0001
- Keppens, G., and Spruyt, B. (2017). Towards a typology of occasional truancy: an operationalization study of occasional truancy in secondary education in Flanders. *Res. Pap. Educ.* 32, 121–135. doi: 10.1080/02671522.2015.1136833
- Klerman, L. V. (1988). School absence: a health perspective. *Pediatr. Clin. North Am.* 35, 1253–1269. doi: 10.1016/s0031-3955(16)36582-8
- Marbouti, F., Shafaat, A., Ulas, J., and Diefes-Dux, H. A. (2018). Relationship between time of class and student grades in an active learning course. *J. Eng. Educ.* 107, 468–490. doi: 10.1002/jee.20221
- Maynard, B. R., Salas-Wright, C. P., Vaughn, M. G., and Peters, K. E. (2012). Who are truant youth? Examining distinctive profiles of truant youth using latent profile analysis. *J. Youth Adolesc.* 41, 1671–1684. doi: 10.1007/s10964-012-9788-1
- Veenstra, R., Lindenberg, S., Tinga, F., and Ormel, J. (2010). Truancy in late elementary and early secondary education: the influence of social bonds and self-control—the TRAILS study. *Int. J. Behav. Dev.* 34, 302–310. doi: 10.1177/0165025409347987

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2020 Gentle-Genitty, Taylor and Renguette. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



School Refusal or Truancy? A Qualitative Study of Misconceptions Among School Personnel About Absenteeism of Children From Immigrant Families

Robin Martin¹, Jean Pierre Benoit¹, Marie Rose Moro^{2,3,4} and Laelia Benoit^{2,3,4*}

¹ Maison des Adolescents de Saint-Denis, Saint-Denis Hospital, Saint Denis, France, ² Maison des Adolescents—Maison de Solenn, Hôpital Cochin, APHP, Paris, France, ³ University of Paris, Medical School, Faculty of Psychology, PCPP, Boulogne-Billancourt, France, ⁴ Center for Research in Epidemiology and Population Health (CESP), Paris-Sud and UVSQ Medical Schools, French National Institute of Health and Medical Research (Inserm), Team DevPsy, Villejuif, France

OPEN ACCESS

Edited by:

David Heyne,
Leiden University, Netherlands

Reviewed by:

Carolyn Gentle-Genitty,
Indiana University Bloomington,
United States
Valentina Tirelli,
University of Parma, Italy

*Correspondence:

Laelia Benoit
laelia.benoit@inserm.fr

Specialty section:

This article was submitted to
Child and Adolescent Psychiatry,
a section of the journal
Frontiers in Psychiatry

Received: 30 September 2019

Accepted: 02 March 2020

Published: 20 March 2020

Citation:

Martin R, Benoit JP, Moro MR and
Benoit L (2020) School Refusal or
Truancy? A Qualitative Study of
Misconceptions Among School
Personnel About Absenteeism of
Children From Immigrant Families.
Front. Psychiatry 11:202.
doi: 10.3389/fpsy.2020.00202

Background: School refusal is a form of school attendance problem (SAP) distinct from truancy, school withdrawal, and school exclusion; it requires specific mental health care. Schools' identification and referral to care of school refusers depends on school personnel's interpretation of the reasons for absences. Because cultural factors can induce misunderstanding of the young people's behavior and of their parents' attitudes toward school attendance, school personnel can have difficulty understanding these reasons for children with transcultural backgrounds (migrants or children of migrants). The aim of this study was to explore the experiences and opinions of school personnel, mainly teachers, related to school refusal among these students.

Methods: Grounded theory methodology was used to conduct 52 qualitative interviews of school personnel in two regions of France. Their daily practices with students presenting with school refusal were addressed in general (i.e., in response to absence of all youth) and in transcultural contexts (i.e., absence of migrant children or children of migrants). This study analyzed the interviews of the 30 participants who reported working with students from transcultural backgrounds.

Results: Many school personnel reported experiencing difficulties, ambivalence, and destabilizing feelings in situations involving immigrant families whose school culture differed from their own. Talking about culture appeared to be taboo for most participants. These situations challenged the participants' usual strategies and forced them to devise new ones to deal with these young people and their families. Although some personnel were at risk of developing exclusionary attitudes, others dealt with school refusal with both commitment and creativity.

Conclusion: The tensions experienced by these participants reveal contradictions between the French universalist ideology and the reality of daily life in schools becoming increasingly multicultural. School personnel's attitudes toward children with

transcultural backgrounds presenting with school refusal can affect children's access to care and shape social inequalities. Further research should develop, implement, and assess interventions including transcultural training of school personnel, improved use of interpreters at school for migrant families, and the addition of a transcultural dimension to SAP assessment scales, especially for school refusal.

Keywords: school refusal, truancy, teacher, school personnel, immigrant youth, minorities, discrimination, school absenteeism

INTRODUCTION

School refusal is a frequent reason for consultation at child mental health services; it is thought to concern about 1% of pupils and 5% of consultations in preadolescence and adolescence (1) and can be associated with comorbidities such as anxiety or depression (2). It was first described in the literature as “school phobia” in 1941 (3). Over the past 60 years, authors have studied its diverse causes and multiple consequences, including the worrisome prognosis associated with extended absenteeism (4) and the other disorders for which it is a risk factor (5). They have also analyzed the role of the family context (6) and the functions of school refusal (7, 8). The emerging international consensual definition of school refusal, which distinguishes this form of school attendance problem (SAP) from others, including truancy, school withdrawal, and school exclusion, relies on four criteria (9): “(1) a young person is reluctant or refuses to attend school, in conjunction with emotional distress that is temporal and indicative of aversion to attendance (e.g., excessive fearfulness, temper tantrums, unhappiness, unexplained physical symptoms) or emotional distress that is chronic and hindering attendance (e.g., depressive affect; sleep problems), usually but not necessarily manifest in absence (e.g., late arrivals; missing whole school days; missing consecutive weeks, months, or years); and (2) the young person does not try to hide associated absence from their parents (e.g., they are at home and the parents are aware of this), and if they previously hid absence then they stopped doing so once the absence was discovered; and (3) the young person does not display severe antisocial behavior, beyond resistance to parental attempts to get them to school; and (4) the parents have made reasonable efforts, currently or at an earlier stage in the history of the problem, to secure attendance at school, and/or the parents express their intention for their child to attend school full-time.” [(9), p.15].

According to Bools and colleagues, the classification of SAPs is difficult because of the need to determine whether parents have put enough pressure on the child to go to school (10). In this conception, the existence of reasonable parental efforts to secure school attendance is considered evidence that the problem is attributable to school refusal instead of truancy. Indeed, according to Heyne et al. “Truancy is said to occur when (1) a young person is absent from school for a whole day or part of the day, or they are at school but absent from the proper location (e.g., in the school-yard rather than in class); and (2) the absence occurs without the permission of school authorities; and (3) the young person typically tries to conceal the absence from their parents.” [(9), p.16].

Nevertheless, Heyne et al. stress that a young person may display all the defining features of school refusal except that his parents have not made a “reasonable effort” to get him to school (9), which the authors define as. “attempts to address the problem, beyond the parent simply expressing to the child their desire that the child attend school. These efforts could include getting the child out of bed or into a mode of transport to go to school, contacting school staff because of nonattendance, and attending meetings aimed at addressing the problem. We acknowledge that in families with two parents, the parents may vary in their efforts to get their child to school, perhaps because of differences in parenting style or self-efficacy.” [(9), p.16].

Although this definition of parental “reasonable efforts” already takes different parenting styles into account, it still overlooks cultural factors that can cause misunderstanding of the young people's behavior and of their parents' attitudes toward school attendance. As Kearney pointed out, “cross-cultural aspects of school absenteeism and school refusal behavior remain in need of greater exploration and explication (5).” Nevertheless, information on the transcultural dimensions of school refusal remains scarce in current educational and psychiatric research (11–13). This omission of the transcultural dimension in research is reflected in guidelines for school personnel, which ignore this issue (14).

Studies have underlined the higher prevalence of absenteeism among ethnic minorities (15) and noted that SAPs among children of immigrants may be a manifestation of systemic discrimination, which could be interpreted as school exclusion (16). Bourdieu and Passeron, in the early 1960s, theorized about the role of school systems in the reproduction of social inequalities (17). They showed that students' objective probabilities of academic success depend on their cultural capital and especially on a school culture congruent with that of its personnel. This sociological perspective has become widespread in France, influencing school policies as well as school personnel, who are aware that these factors impair their students' chances of success. This awareness does not prevent them, however, from experiencing a sense of mismatch in their work with families that do not share their school culture—including immigrant families.

Although French data protection laws make it hard to collect information about minorities and migrants, one of the rare reports authorized on this topic underlined the general difficulties of academic achievement for immigrant youths (18), even beyond school attendance problems. The school refusal behavior of some adolescent immigrants is sometimes an expression of their anxiety about academic achievement (11). Relevantly, Moro has described

adolescence—the age group corresponding to middle school and high school—as a period of vulnerability, especially combined with the migration-specific difficulties with which these youth and their families must cope (19). However, sociological and pedagogical studies have addressed children's transcultural backgrounds only in relation to school topics such as literacy (20), underperformance at school, discipline, and interpersonal conflicts (21). To the best of our knowledge, exploration of the attitudes and representations of immigrant parents in relation to school attendance problems is sparse (22).

One hypothesis among the many potential explanations for the visible lack of reasonable parental efforts in what is labeled truancy is the existence of cultural and social differences between the parents and the school. Evidence supporting this hypothesis might thus underline the limitations of the current classification system, including the major risk of misdiagnosis it poses for immigrant youths whose behavior might be incorrectly labeled as truancy rather than school refusal. We suggest that socio-cultural factors must be studied in the definition of school refusal, given their potential influence on the behavior of both youths and their parents and on the understanding of the personnel in both schools and health care facilities. The aim of this study was thus to explore the experiences and opinions of school personnel, mainly teachers, on the topic of school refusal among students from migrant families. To our knowledge, this study is the first to focus on school personnel's understanding of cultural factors that can shape the care pathway of adolescents with transcultural backgrounds.

METHODS

Ethics Evaluation

This qualitative study, which followed the COREQ guidelines (23), was approved by the competent institutional review board, the INSERM Ethics Evaluation Committee (IRB00003888).

Choice of Methodology

This research applied Grounded Theory (GT) methodology. First used in an ethnographic study of hospital patients who were dying, GT has been a standard (with many variants) methodology for social sciences research since the 1980s (24). It is a general methodology, a way of thinking about, collecting, analyzing, and conceptualizing data. It uses inductive reasoning, in contrast to hypothetico-deductive models, to construct theories through systematic gathering and analysis of data. GT also links individual and subjective experience to social processes, by focusing on themes that represent phenomena, interactions, and their consequences. The choice of GT was justified by our research question (i.e. the opinions and experiences of school personnel on the topic of school refusal among students from migrant families) for which the existing literature is extremely sparse. Moreover, other inductive qualitative methods confining the analysis to the individual phenomenological level (such as Interpretative Phenomenological Analysis), would disregard two major aspects of the question we are studying: face-to-face interactions (microsociology) and daily practices of groups (mesosociology). Thus, the application of GT enables us to interpret the results in the light of several concepts

from the fields of sociology and anthropology (for further details, see the *Discussion* section).

Inclusion

As in other inductive methods, we did not need to define an exact number of respondents before the research began. Purposive sampling (25) was used to recruit a nonprobability sample population, based on subjective criteria related to the study's goals; this method is very common in qualitative studies (which have goals different from those of quantitative studies and for which representativeness is not a criterion). In the Paris area, personnel at two middle schools (*collèges*) participated, and in Bourgogne Franche-Comté, participants came from one urban high school and two middle schools, one urban and one rural. These were all public schools, which 83% of pupils in France attend (26). These schools, of different sizes, in different geographical areas, and serving a broad range of socioeconomic groups, were selected to maximize the global heterogeneity of the sample. School personnel included teachers, principals and assistant principals, educational assistants, guidance counselors, and school doctors and nurses. Interviews were also conducted with doctors in the local education authorities and in one schooling association (that provides teaching services at home or in hospitals).

In interviews, we specifically used the standard definition of school refusal by Berg (9, 27), which includes: a) reluctance or refusal to attend school, often leading to prolonged absences, b) staying at home during school hours with parents' knowledge rather than concealing the problem from parents, c) experience of emotional distress at the prospect of attending school (somatic complaints, anxiety, and unhappiness), d) absence of severe antisocial behavior, and e) parental efforts to secure their child's attendance at school. We decided not to consider criterion (e), because, in transcultural contexts, school personnel might have even more difficulty in determining whether parents made sufficient "reasonable efforts" to get the child to go to school than in intracultural contexts (10).

Participants

All 52 participants interviewed were asked if they worked with students with transcultural backgrounds (i.e., students who were first- or second-generation migrants, that is, migrant children or the children of migrants). Only 30 responded affirmatively that they taught or otherwise dealt with such students. These participants' understanding of these students' SAPs were discussed in their interviews, in light of the Berg criteria for school refusal (except criterion e, as stated above). The interviews of these 30 participants are analyzed here. Their characteristics are summarized in **Table 1**.

Procedure

All participants were interviewed by one of two researchers (RM and LB). All in-depth interviews were tape-recorded, transcribed, and anonymized. Pseudonyms are used when necessary. All participants provided oral informed consent before their inclusion in the study and were asked to repeat it at the beginning of the recording. Because the ethics committee considered that written consent might weaken the anonymization

process by linking names to the consent, it required audio-recorded oral consent. An interview guide for in-depth interviews was developed and included open-ended questions that focused on how participants understand school refusal and the practices that might shape the health care pathway of youths from families with transcultural backgrounds. The in-depth interviews sought to obtain a detailed, rich understanding of the topic of interest. The participants' experiences, behaviors, feelings, and attitudes were probed deeply to identify underlying concepts that the researchers analyzed to generate a theory that provided a deeper understanding of the research topic.

In-depth interviews are more structured than narrative interviews as the topic discussed is directed by the researcher, and they rarely involve stories or life histories. They do, however, allow the participant to communicate much more freely and to provide more detailed descriptions than in semistructured interviews. The precise details of the research questions were not revealed during the interviews, to prevent them from influencing the material obtained or "leading" the participants to particular responses. Rather, the general area of interest was explained to the participants, and the interviewer directed further conversation based on the responses. In accordance with GT's inductive methodology, the initial open questions used in the interview guide were based on the international literature, but kept evolving over the course of interviews, as they

were analyzed. The interview guide included questions such as: "Can you tell me about the situations of school refusal you've encountered?", "What does 'school refusal' mean to you?" and "How do you manage these situations?"

As required by GT, the data analysis, sampling of new participants by in-depth interviews, and theoretical development continued simultaneously until saturation was reached and a new theory was constructed about our topic (28). LB and RM independently coded all interviews. During the analysis, categories were created by gradual coding of the data, which were constantly compared with those from new interviews, with the codes modified as needed. Triangulation of the analysis, which guarantees the quality of individual coding, took place during monthly meetings of our research group (LB, RM, JB, and MM).

RESULTS

The practices of school personnel for dealing with school refusal among children with transcultural backgrounds were captured in four main themes: (1) working with students with transcultural backgrounds: coping with unusual situations, (2) families' school culture is different than that expected by school personnel, (3) profiling students without addressing their culture, and (4)

TABLE 1 | Sample characteristics.

Interview	Gender	Age	Profession	School	Region	Deals with transcultural situations?
1	M	34	Mathematics teacher	Middle school	Paris	Yes
2	F	35	Head guidance counselor	Middle school	Paris	Yes
3	F	52	Spanish teacher	Middle school	Paris	Yes
4	F	55	French teacher	Middle school	Paris	Yes
5	F	53	English teacher	Middle school	Paris	Yes
6	F	38	School nurse	Middle school	Paris	Yes
7	F	45	Director	Schooling association	Paris	Yes
8	F	42	Teacher	Schooling association	Paris	Yes
9	F	58	Teacher	Schooling association	Paris	Yes
10	M	50	History teacher	Middle school	Paris	Yes
11	F	52	School nurse	Middle school	Paris	Yes
12	F	55	School doctor	Middle school	Paris	Yes
13	F	40	Mathematics teacher	High school	Bourgogne Franche-Comté	Yes
14	F	40	English teacher	High school	Bourgogne Franche-Comté	Yes
15	F	29	History teacher	High school	Bourgogne Franche-Comté	Yes
16	M	50	Head guidance counselor	High school	Bourgogne Franche-Comté	Yes
17	F	60	Assistant principal	High school	Bourgogne Franche-Comté	Yes
18	F	51	School nurse	High school	Bourgogne Franche-Comté	Yes
19	M	55	Principal	High school	Bourgogne Franche-Comté	Yes
20	F	50	English teacher	High school	Bourgogne Franche-Comté	Yes
21	F	45	French teacher	High school	Bourgogne Franche-Comté	Yes
22	F	35	English teacher	High school	Bourgogne Franche-Comté	Yes
23	F	60	School doctor	Local education authority	Bourgogne Franche-Comté	Yes
24	F	53	French teacher	Middle school	Bourgogne Franche-Comté	Yes
25	F	30	Educational assistant	Middle school	Bourgogne Franche-Comté	Yes
26	M	47	Principal	Middle school	Bourgogne Franche-Comté	Yes
27	F	50	Biology teacher	Middle school	Bourgogne Franche-Comté	Yes
28	M	50	School nurse	Middle school	Bourgogne Franche-Comté	Yes
29	F	59	French teacher	Middle school	Bourgogne Franche-Comté	Yes
30	F	36	French teacher	Middle school	Bourgogne Franche-Comté	Yes

overcoming cultural barriers (see **Figure 1**). These practices also underlined the differences between the immigrant populations in the Paris area and in the Bourgogne-Franche-Comté region. In Paris, the situations mentioned most often concerned second-generation immigrants from North and sub-Saharan Africa and from Asia, while in Bourgogne, encounters with travelers (largely various groups of Roma, also administratively designated as “*gens de voyage*” in France) and young political refugees from the Middle East were more frequent. The participants reported no situations involving school refusal among the young refugees. The main results are shown in **Figure 1**, and the transcripts are summarized in **Table 2**.

Working With Students With Transcultural Backgrounds: Coping With Unusual Situations

Perplexing Situations

The participants reported feeling destabilized by their encounters with otherness. Many of them described the psychological distress of these students from transcultural background as perplexing, difficult to understand, and mysterious.

“(Talking about Chinese sisters): they are severely um ... affected ... by something that is, in my opinion, really hard to deal with. For them. Because I've rarely seen that, uh...”
(French teacher, 4).

“There's a student who's from Kosovo, arrived 5 years ago, [and] who I had last year in Year 10, she was absent a lot for, apparently for depression, so I didn't know more about it than that, it's hard to say that she

was one of the students, that's all, it was really something a little different”
(French teacher, 21).

Participants described feeling shocked, awkward, and astonished. Accordingly, several of the participants used the term type when they were asked to describe unexpected behaviors of youths from transcultural background.

“(About a young sub-Saharan girl): You have this girl, who is basically apathetic. You'll see who can be discomfited! The “I don't care” type. When I say impassive, it's impressive. You have the impression that nothing is happening, really, it's the right term”
(School nurse, 6).

Routines Challenged by Unusual Situations

These unusual situations jeopardized these school personnel's regular practices by defeating their standard strategies. They rattled their pedagogic reasoning, upsetting everything from their communication to their ability to find practical solutions. A math teacher (participant n°1) noted

“It complicates things. And it wasn't only not speaking the language. When you don't understand yourself, well you don't know, it's hard to say “You have to be careful about this.” If the person understands one word out of two, the whole meaning might be distorted. And then, the understanding of the French educational system, its requirements. Finally everything is more complicated, at that point it's much harder to work, it's harder to understand the causes, and as a result, harder to draw conclusions”.

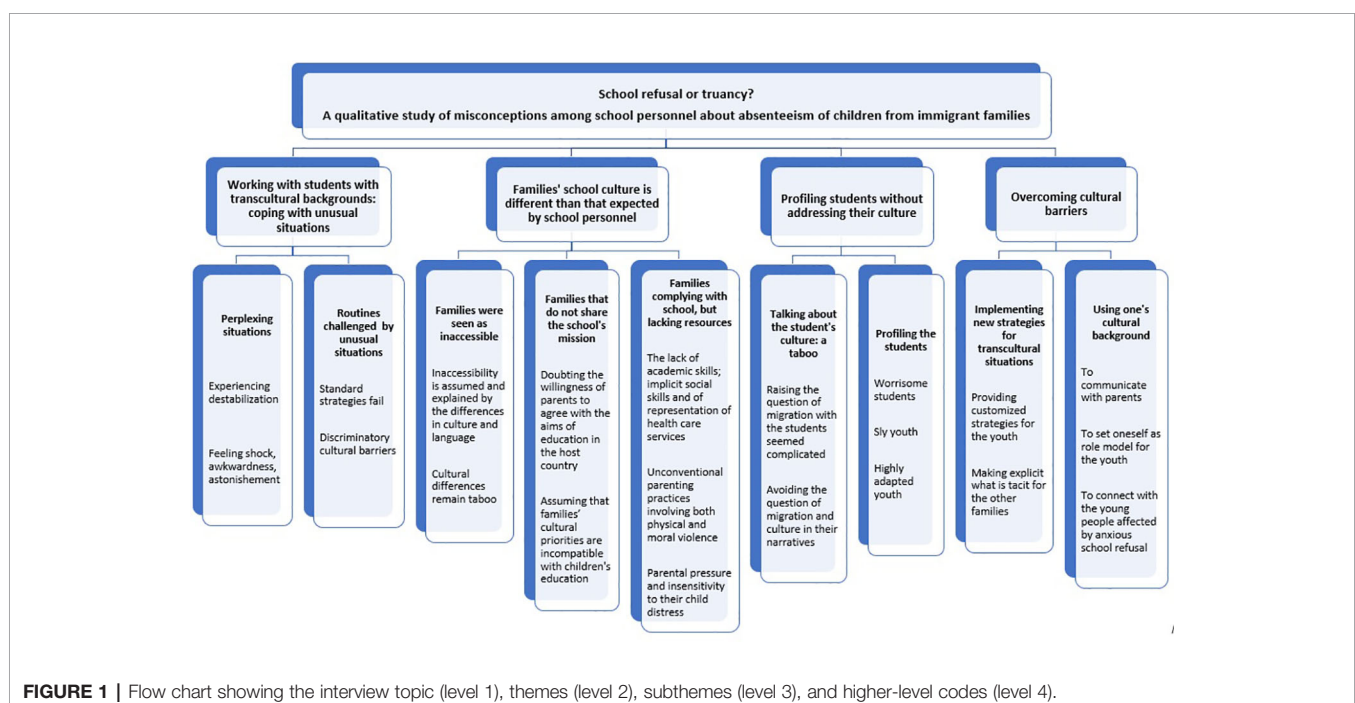


FIGURE 1 | Flow chart showing the interview topic (level 1), themes (level 2), subthemes (level 3), and higher-level codes (level 4).

TABLE 2 | Illustrative quotations from transcripts.

Themes	Categories	Quotes
Working with students with transcultural backgrounds: coping with unusual situations		
Perplexing situations	Experiencing destabilization	(Talking about Chinese sisters): "they are severely um ... affected ... by something that is, in my opinion, really hard to deal with. For them. <i>Because I've rarely seen that</i> , uh..." (French teacher, 4) "There's a student who's from Kosovo, arrived 5 years ago, [and] who I had last year in Year 10, she was absent a lot for, apparently for depression, so I didn't know more about than that, it's hard to say that she was one of the students, that's all, <i>it was really something a little different</i> ." (French teacher, 27)
	Feeling shock, awkwardness, astonishment	(About a young sub-Saharan girl): "You have this girl, who is basically apathetic. You'll see who can be discomfited! The 'I don't care' type. When I say impassive, <i>it's impressive</i> . You have the impression that nothing is happening, really, it's the right term." (School nurse, 6) (Talking about a Kabyle youth): "I had a young man who was failing. He wasn't coming [to school]. We were very <i>shocked</i> . When the parents were able to say, it's the mother who explained, that 'we can't help him with school'. The mother was illiterate." (English teacher, 5)
Routines challenged by unusual situations	Standard strategies fail	"It complicates things. And it wasn't only not speaking the language. When you don't understand, yourself, well you don't know, it's hard to say 'You have to be careful about this.' If the person understands one word out of two, the whole meaning might be distorted. And then, the understanding of the French educational system, its requirements. Finally everything is more complicated, at that point it's much harder to work, it's harder to understand the causes, and as a result, harder to draw conclusions." (Math Teacher, 1)
	Discriminatory cultural barriers	"There's a parent, I believed he wouldn't speak very well. In fact, he speaks very very well." (School nurse, 6) "Parents don't express themselves very well in French, so the children are sort of left to themselves. They're in school, but it becomes complicated." (School nurse, 6) "We've forgotten to say, 'Why? Why is he not managing to meet our requirements?' For us, it was 'immature' or 'he doesn't listen!' And, well, no, there is nonetheless a minority, a numerous minority who don't fit into our explanations." (English teacher, 5)
Families' school culture is different than that expected by school personnel		
Families were seen as inaccessible	Inaccessibility is assumed and explained by the differences in culture and language	"There are cultures—without necessarily being misogynist— <i>it's cultural</i> ... People who might be bothered, there, if it were a guy, sometimes, I'm sure that, I think that it could change the situation." (School nurse, 6)
	Cultural differences remain taboo	"It's hard, [the] single-parent families, it's complicated, because we also have cases of polygamy, anyway, not enormously but um, it's not known <i>it's not said, it's not written</i> , but we know ... <i>Because we asked a question, and we didn't understand</i> , and we know that it's polygamy. Single-parent, that doesn't say much." (School doctor, 13)
Families that do not share the school's mission	Doubting the willingness of parents to agree with the aims of education	"Among the students who I knew they were victims of anxious school refusal, there are sometimes families that are extremely caring, concerned and put time into their children's education, and others sometimes can be a little less so, uh" (History-geography teacher, 11)
	Assuming that families' cultural priorities are incompatible with children's education	"There is, sometimes, a lack of interest in school that can be linked to the family's culture. A child, those they call the travelers, there are a lot of them around here. And the school culture is truly under ... underestimated, undervalued. The idea is to be able to work as soon as possible, manual labor, and soon." (Principal, 41) "The travelers, it depends on the season. There's a semi-chronic absenteeism, in these families. At harvest time, the kids disappeared, they reappeared after. For me, <i>it's cultural</i> . The lifestyle is not compatible with on-going education." (French teacher, 38) "When you come from a country where school is more a question of luck and an optional right, ok, he goes to school occasionally and there is not so much regular follow-up of lessons. There are some parents who also don't understand, the necessity that the child be there" (Math teacher, 1) "I see families of sub-Saharan origins especially, school isn't more or less important than anything else. They don't see the stakes of school in our civilization, clearly." (School doctor, 13) "Religion is starting to take a large role in our society. This religion makes people ... stand out by the fact of belonging to a group. And so school has no more reason to exist. The older generation, where, on the contrary, the children were super-proud of succeeding, for their parents, and the parents were very proud of their children's success, and of their total integration in the country. You were supposed to be completely integrated, not show your difference. But now, the aim is to show your difference." (Spanish teacher, 3)
Families complying with school, but lacking resources	The lack of academic skills	"The families don't all have, necessarily, <i>the resources</i> that would enable them to ensure, "success" (in quotation marks), but can nonetheless have an extremely negative view of failure." (History and geography teacher, 11)
	The lack of implicit social skills	"He started to not come anymore ... But really, fear in the belly, you know! We had to telephone them to find out what was going on. They came. The mother explained." (English teacher, 5)
	The lack of representation of health care services	"Sometimes <i>we have trouble making the parents come in</i> , it's not in their culture, psychiatrists ... well there are plenty of civilizations where it's not in the culture ... to make them understand that there is care that is necessary." (School doctor, 13) "Culturally, sometimes, with the Asian population, we have trouble getting them to adhere to care." (School nurse, 12)

(Continued)

TABLE 2 | Continued

Themes	Categories	Quotes
	Unconventional parenting practices involving both physical and moral violence.	"It is striking to observe families from foreign countries, who seem, in relation to school, to be conscious of the importance of the institution, but whose response is a sort of a condemnation that is demonstrated like that, publicly, and that can even take sometimes violent forms." (History-geography teacher, 11)
	Parental pressure and insensitivity to their child distress	"It's the parents who had the most trouble expressing themselves in French [who] were the most severe with their children. I had asked them to come in to see me, because his grades weren't good, and then he got slapped in the head. It was a question of honor. The parents feel very guilty each time that there's a report of dropping out. You see it in their attitude, even though it's expressed differently." (Biology teacher, 42)
		"The parents demanded that it continue to work well. He was coming less and less often to class, and the family demanded that he be at school." (School nurse, 12)
		"Chinese ... it's silence, they say nothing, [the parents] say nothing, everything is fine ... Clams ... but no, it'll be ok, they clench their teeth, and then they come." (School doctor, 13)
		"Parental pressure is a factor in school phobia. There's greater parental pressure in the Asian community than in the other communities." (School doctor, 13)
Profiling students without addressing their culture		
Talking about the students' culture: a taboo	Teachers' difficulty to refer to culture and migration in their narratives	"I asked one of them where she had been in school, because I didn't dare ask if she was born in France." (French teacher, 4)
	Using euphemisms and conniving allusions	"You rarely have, uh... 'René', most of the time you have 'Mamadou.' Ok, you see?" (English teacher, 5)
Profiling the students	Worrisome students	(Talking about two Chinese sisters): "They do everything they can to be forgotten and they succeed. They don't move. They don't gesture. They don't catch my eyes. I asked one of them to tell me if, because they are ... I said to myself: there, maybe they don't speak French well, they are completely lost." (French teacher, 4)
	Sly youth	"We have a lot of first-generation immigrants who do not speak French at all. And as a result, no matter how many letters you send them, no matter how many times you call, sometimes you get the student, you don't know, sometimes he fakes it! He picks up and says, "Yes yes I'll tell him." (Math teacher, 1)
	Highly adapted youth	"We have a lot of foreign students. They invest enormously in school because they understand that it is their only path to salvation. These children [with anxious school refusal] are vulnerable, from an emotional point of view, a little overprotected. Those [immigrant youth], inversely, they are torn from their parents, torn from their family, torn from their friends, and they are super happy to be here." (Head Guidance Counselor, 19)
		"They have a power of adaptation, finally ... there are two kids who came from Italy, and who came perhaps from Syria before. And so they learned, they already speak French really well, it's incredible! (Educational assistant, 39)
Overcoming cultural barriers		
Implementing new strategies for transcultural situations	Providing customized strategies for the youth	"Sometimes we let the students leave, because they have a psychiatry appointment and their parents mustn't know. Because that can put them in danger." (Head Guidance Counselor, 2)
	Making explicit what is tacit for the other families	"It can be hard to make [Chinese parents] understand that there is treatment that is necessary, so that they want to hear uh ... it's complicated for their child ... that their child, he's not well." (School doctor, 13).
Using one's cultural background	To communicate with parents	"I come from another culture too, my family is Iranian. So, I know how to talk to parents who believe that all you have to do is say, 'listen to your teacher, listen to your teacher.' Because there's no agreement about values, especially in middle school." (English teacher, 5)
	To set themselves as role model for the youth.	"I'm originally Algerian and there've been students from North Africa and who weren't succeeding. [They said] 'in any case, I'm stupid, my parents can't read'. So I explained to them, well, my parents couldn't read or write either, but I passed the agreg [advanced civil service test]. I think that also affected them. Anything is possible, and then as a result I set up personalized help for them. [They told me] 'you give us personalized help, finally someone who listens to us, who considers us.'" (English teacher, 29)
	To connect with the young people affected by anxious school refusal	"There remains, even for these youth, a desire for 'cultural nourishment.' History and geography are often very important for these youth who have ... anxious school refusal ... because they always find an association with their past, their culture, their roots." (Director, 7)

Obstacles are often embodied by language barriers. In this sense, a language barrier was assumed before the first encounter with the parents. This barrier, when it exists, is often considered equivalent to parental inability to raise and educate their children responsibly. Only one of the 30 participants, however, pointed out that prejudices shape educators' practices regarding

numerous children who do not conform to the way they usually understand learning difficulties. No other participants acknowledged any bias. To illustrate these discriminatory cultural barriers, the teacher described a Kabyle youth whom the school personnel had considered a "truant" until a conference with the family showed that the behavior was in

reality school refusal. This dialogue occurred only because the school personnel took the initiative to call the parents. The parents had not dared to contact the school and appeared to accept the child's absences; their apparent failure to secure their child's attendance at school led to the conclusion the child's behavior could not be school refusal but was instead truancy. This shows the potential for misdiagnosis between truancy and school refusal, according to Berg's criteria, when applied to children of migrant families.

"I had a youth who was failing, he was afraid to come [to school] because he knew he hadn't done his homework, that we were going to reproach him. We had created a very onerous climate. At a certain point, he started to not come anymore. But really, he was petrified, you know! We were very shocked that ... when the parents were able to say ... because the youth, he had never said. We had to telephone them to find out what was going on. They came, and the mother explained that "we can't help him with school work". The father works from morning till night, and the mother was barely literate. So he had fallen behind. We, by our demands—which were justified—we had just forgotten to ask ourselves why he wasn't managing to meet our requirements. For us, he was "immature", "he doesn't listen". And, well, no, there is nonetheless a minority, a numerous minority, who don't fit into our explanations. This kid was petrified to come to school. It can be truly overwhelming" (English teacher, 5).

Families' School Culture Is Different Than That Expected by School Personnel **Families Were Seen as Inaccessible**

Both school medical personnel and teachers expressed their impression that immigrant families are inaccessible. A language barrier was assumed before the first talk. Beyond the language issue, participants explained this inaccessibility by reasons such as differences in cultural representations. For example, a school nurse (participant n°6) saw the difference in male-female relationships as accounting for her unease when talking to migrant fathers.

"There are culture—without necessarily being misogynist—it's cultural ... People who might be bothered, there, if it were a guy, sometimes, I'm sure that, I think that it could change the situation."

However, talking openly about cultural difference remained taboo for the participants. Polygamy, for instance, is a cultural practice common in several African countries, but forbidden in France. Thus, when the participants understood that the students' parents were living in this illegal form of marriage, they evoked the topic only indirectly, through allusions.

Similarly, participants who had contact with immigrant families described diverse school-related representations, behaviors, and skills indirectly. Moreover, they understood the difficulties they encountered in dealing with these families in two different ways:

Families That Do Not Share the School's Mission

Sometimes, participants doubted the willingness of some immigrant parents to agree with the aims of education in the host country. They questioned whether some parents intended to play their customary role in French society, where parents are expected to help their children with their school work and thus support and promote their academic achievement. Some participants implied that some parents might be inattentive to their child.

"Among the students who I knew they were victims of anxious school refusal, there are sometimes families that are extremely caring, concerned, and put time into their children's education, and others sometimes can be a little less so, um..." (History-geography teacher, 10).

Other parents were seen as uninterested in the child's schooling. Participants explained this by both cultural reasons and priorities incompatible with the children's education and integration into the education system. Some personnel considered that parents were not prepared for the importance of school in French society:

"When you come from a country where school is more a question of luck and an optional right, ok, he goes to school occasionally and there is not so much regular follow-up of lessons. There are some parents who also don't understand, the necessity that the child be there" (Math teacher, 1).

According to some participants, some families, including immigrants, have shifted their life goal from school success to religion and religious membership. The older generations of migrants had sought assimilation through school achievement and the concealment of any cultural difference. However, the younger generation appeared to claim their pride in aspects of their identity setting them apart from the culture of the host country, such as religion. As one teacher said,

"Religion is starting to take a large role in our society. This religion makes people ... stand out by the fact of belonging to a group. And so school has no more reason to exist. The older generation, where, on the contrary, the children were super-proud of succeeding, for their parents, and the parents were very proud of their children's success, and of their total integration in the country. You were supposed to be completely integrated, not show your difference. But now, the aim is to show your difference" (Spanish teacher, 3).

Families Complying With School, but Lacking Resources

Immigrant parents were sometimes depicted as, at most, willing to help their child presenting school refusal by encouraging them to attend. School personnel described parents who, despite their goodwill, lacked academic and social skills and had inaccurate representations of mental health care and inappropriate educational attitudes that could account for their children's school issues. Some families who agreed with the school culture in France and its aims (academic achievement) lacked the academic skills necessary to help their child:

"The families don't all have, necessarily, the resources that would enable them to ensure, "in quotation marks" success, but can nonetheless have an extremely negative view of failure"
(History and geography teacher, 10).

Participants stressed parents' lack of social skills as an explanation for some immigrant parents' relationships to institutions, such as school and health care services. For instance, some parents did not grasp that they were expected to be the ones to call school personnel and ask for a meeting. The lack of this implicit social skill required to interact with the school sometimes led to misunderstandings. School medical personnel also attributed the difficulty in referring immigrant families to mental health care services to a lack of representations of integrated youth health care services (29, 30).

"Sometimes we have trouble making the parents come in, it's not in their culture, psychiatrists ... well there are plenty of civilizations where it's not in the culture ... to make them understand that there is care that is necessary"
(School doctor, 12).

"Culturally, sometimes, with the Asian population, we have trouble getting them to adhere to care"
(School nurse, 11).

Participants sometimes mentioned parents' inappropriate or unusual attitudes towards their children with emotional or academic difficulties. During parent-teacher meetings at school, participants noticed unconventional parenting practices involving both physical and moral violence. Parents sometimes considered public physical violence to be a way to demonstrate their efforts to secure school attendance, despite their inability to provide the child with effective support.

"It's striking to observe families from foreign countries, who seem, in relation to school, to be conscious of the importance of the institution, but whose response is a sort of a condemnation that is demonstrated like that, publicly, and that can even take sometimes violent forms"
(History-geography teacher, 10).

Some participants underlined the moral dimension of the relationship of these families with the school, reflected in their willingness to show their honor, responsibility, and respect for school rules:

"It's the parents who had the most trouble expressing themselves in French [who] were the most severe with their children. I had asked them to come in to see me, because his grades weren't good, and then he got slapped in the head. It was a question of honor. The parents feel very guilty each time that there's a report of truancy. You see it in their attitude, even though it's expressed differently"
(Biology teacher, 27).

Physical violence was not the only inappropriate means by which immigrant parents expressed their efforts to get their child to school. Parental demands related to school attendance can also be viewed as a kind of insensitivity to their child's distress and as rigidity in their relationship with school personnel, as these statements by school medical personnel show about some families from China.

"The parents demanded that it continue to work well. He was coming less and less often to class, and the family demanded that he be at school"
(School nurse, 11).

"Chinese ... it's silence, they say nothing, [the parents] say nothing, everything is fine ... Clams ... but no, it'll be ok, they clench their teeth, and then they come"
(School doctor, 12).

Some participants feel that this "unsympathetic" support from some immigrant parents for the schooling of their child is parental pressure that can lead the child to develop school refusal:

"Parental pressure is a factor in school refusal. There's greater parental pressure in the Asian community than in the other communities"
(School doctor, 12).

To conclude, these two different lines of thinking—intentional lack of parental efforts, on the one hand, and lack of resources, on the other—were often observed in interviews of the same participant. This reflects their constant ambivalence and doubts when trying to decide whether to assign responsibility (internal causality in the family) or point out determinism (external causality) in each situation.

Profiling Students Without Addressing Their Culture

Talking About the Students' Culture: A Taboo

Participants appear to find raising questions with their students about the students' difference, foreignness, to be sensitive,

potentially offensive, just as they did in talking with and about the families. They hesitated to talk about culture with the students, speaking carefully and sometimes using alternate euphemisms, such as geographic origin, or ethnic group, migration status, or other categories.

“I asked one of them where she had been in school, because I didn't dare ask if she was born in France.”
(French teacher, 4).

They also found it difficult to refer to culture and migration in their narratives; this was true from the perspectives of both style and content. To name the otherness of these young people, school personnel used several different qualities and mixed them, for example, switching between ethnic dimension and migration status. Several levels of language were used, varying from formal words (such as “first-generation immigrants”) to more colloquial ones (“Chinese”). Sometimes participants even tried to overcome their unease by inviting the interviewer to share conniving allusions to foreign names, to underline their exoticism, their difference.

“You rarely have, uh...”René,” most of the time you have “Mamadou.” Ok, you see?”
(English teacher, 5).

Profiling Students

Despite their difficulties dealing with the topic of the students' origins, some participants drew collective portraits of the immigrant youth, with descriptions very different in Paris and Bourgogne. Some profiles were idealized, others more pejorative.

In Paris, interviews were conducted in multicultural and multiethnic schools, with first- and second-generation immigrant students. Some participants reported worrisome students who made efforts to become invisible to their classmates and to the teacher. Paradoxically, this attitude apparently helped to call them to the attention of the teacher, who was impressed by this effort at invisibility. Although non-immigrant youth with school refusal also worked at hiding themselves in plain sight, at least some participants seemed to explain this attitude as transcultural, through the language barrier, for instance:

“(Talking about two Chinese sisters): They do everything they can to be forgotten and they succeed. They don't move. They don't gesture. They don't catch my eyes. I asked one of them to tell me if, because they are ... I said to myself: there, maybe they don't speak French well, they are completely lost”
(French teacher, 4).

Some immigrant youths were perceived as sly, trying to take advantage of their parent's cultural distance from the school, making use of the parent's lack of knowledge of some social codes and practices to reap benefits or avoid penalties in some situations. The language barrier between their parents and school personnel was sometimes used similarly:

“We have a lot of first-generation immigrants who do not speak French at all. And as a result, no matter how many letters you send them, no matter how many times you call, sometimes you get the student, you don't know, sometimes he fakes it! He picks up and says, “Yes, yes I'll tell him”
(Math teacher, 1).

In Bourgogne, young refugees were mostly described as highly adapted youth, strongly invested in their schooling and expressing no difficulties. The head guidance counselor explained this excellent involvement by the school's role as their only lifeline. This picture of the resilient young refugees showing interest in school despite adverse life events was opposed to a portrait of youths with school refusal who were born in France of French parents.

“We have a lot of foreign students. They invest enormously in school because they understand that it is their only path to salvation. These children [with anxious school refusal] are vulnerable, from an emotional point of view, a little overprotected. Those [immigrant youth], inversely, they are torn from their parents, torn from their family, torn from their friends, and they are super happy to be here”
(Head Guidance Counselor, 16).

Some personnel underlined these students' ability to adapt to the French educational system and the French language.

“They have a power of adaptation, finally ... there are two kids who came from Italy, and who came perhaps from Syria before. And so they learned, they already speak French really well, it's incredible!”
(Educational assistant, 25).

Overcoming Cultural Barriers Implementing New Strategies for Transcultural Situations

The perturbing transcultural situations encountered by the participants obliged them to adopt a reflexive attitude and to carefully think through the circumstances to adapt their practices. Several developed customized strategies for these youths, sometimes collectively organized with the school team, sometimes more individually. One example was the provision of confidential support to students, unbeknown to their relatives. As the head guidance counselor (participant n°2) pointed out:

“Sometimes we let the students leave, because they have a psychiatry appointment and their parents mustn't know. Because that can put them in danger.”

With immigrant families, personnel may have to state explicitly that which is understood tacitly by other families. This pedagogy can be done either through official institutional activities or in a less formalized manner, through direct conversation.

Using One's Cultural Background

Among the most creative ways participants supported families, one involved the use of their own cultural background to communicate with parents and to undertake a sort of decoding of the values espoused by the school system of the host country.

"I come from another culture too, my family is Iranian. So, I know how to talk to parents who believe that all you have to do is say, "listen to your teacher, listen to your teacher". Because there's no agreement about values, especially in middle school" (English teacher, 5).

These participants used their cultural background and their academic achievement to set themselves as role models for the youth. They also offered them personalized review courses:

"I'm originally Algerian and there've been students from North Africa and who weren't succeeding. [They said] "in any case, I'm stupid, my parents can't read." So I explained to them, well, my parents couldn't read or write either, but I passed the *agreg* [advanced civil service test]. I think that also affected them. Anything is possible, and then as a result I set up personalized help for them. [They told me] "you give us personalized help, finally someone who listens to us, who considers us" (English teacher, 22).

Subjects, such as history or geography, linked to the culture are another means of connecting with the young people affected by school refusal. As one school director (participant n°7) said:

"There remains, even for these youth, a desire for "cultural nourishment". History and geography are often very important for these youth who have ... anxious school refusal ... because they always find an association with their past, their culture, their roots."

DISCUSSION

In Which Cases of School Refusal Is the Issue of Culture Noticed, and in What Ways?

Only 30 school personnel interviewed about school refusal reported working with students with transcultural backgrounds. Their interviews underlined the discomfort that they experienced when they had to deal with families with cultural differences. The French school system is steeped in the ideology of the *République laïque* and antiracism, inherited from the Enlightenment philosophers who proclaimed their "indifference to differences" on the public scene, that is, to say, in institutions such as hospitals and schools. These imposed neutral priorities sometimes lead school personnel to avoid dialogue about cultural and ethnicity issues when they deal

with minorities. This avoidance produces the taboos described in the *Results* section and therefore requires specific attention in "color-blind" societies that are in reality multicultural. Treating differences as taboos may force school personnel to use superficial and thus biased concepts of culture in their dealings with immigrant families.

The participants' narratives when speaking of SAPs in transcultural contexts revealed that their encounter with otherness and cultural difference was unexpected. These transcultural encounters left them uneasy, troubled, even stunned, emotions transmitted by the words and tone of their responses. To some extent, this recalls some traits of posttraumatic narratives. These unusual situations dissolved their professional self-confidence, leaving them passive and helpless in the face of this experience. The puzzlement expressed in their answers on the topic of school refusal by youths from transcultural backgrounds might thus mirror the traumatic experience of their encounter with otherness, perhaps recalling the concept of vicarious traumatization (31). Thus, the non-standard practices subsequently developed by some participants for dealing with these situations might be seen as defensive strategies to enable them to again become an active participant, thus recovering their professional identity. Inversely, when students belonging to the dominant culture exhibited SAPs, school personnel never mentioned cultural factors because, in that situation, they perceive no reason to think about or question the implicit cultural beliefs and values that they share with the family.

The School Personnel's Ambivalence Toward Cultural Factors

Participants' responses to school absenteeism of children from transcultural backgrounds vary, but seem to share a common denominator: the necessity for school personnel to shift from prereflexive adjustment to a situation to conscious reflexivity. Working with immigrant families often leads social workers and care providers to discover previously unseen modes of socialization, unique for each family, as underlined by Lahire (32). Lahire argues that the greater the difference between how the family and the teacher understand school requirements, the less likely the student is to achieve success in school (33). This risk of failure is even greater if, as is most often the case, school personnel are unaware of the families' internal approach or reasoning in relation to school. One example of this, illustrated by the participants' descriptions of their experiences, is the issue of corporal punishment at school. Physical punishment was previously authorized by law in French schools, but is now illegal. French parents know today that this written law prevails over customary laws that did to a certain extent allow violence against children. This may explain why participants were shocked by the parental corporal punishment in front of them, behavior from another time regarded as retrograde. Thus, participants may not have even considered the possibility that these migrant families have a different attitude or approach to corporal punishment, one sustained by different sociological and cultural processes, as Delanoë has pointed out (34).

The encounter with families with transcultural backgrounds confronts school personnel with a different cultural approach to school (or care) from their own. The personnel lack both theoretical training in transcultural issues and practical experience with migrant families. The unusual situations they faced defied their usual work strategies, which are appropriate for families in intracultural contexts. Thus, school personnel's understanding of the behavior of both students and parents can be riddled with prejudices and stereotypes. There is accordingly a risk of negative bias in how school personnel perceive immigrant families: they often meet the student or his or her family for official appointments or when the family is summoned for disciplinary issues. These negative experiences increase the risk that personnel will form negative, often inaccurate impressions of these immigrant families, for example, by perceiving some parents as abdicating their parental responsibility by their manifestation of a different relationship to the school (35). Such misunderstandings in turn may well influence the staff's current and future representations, perhaps resulting in a "self-fulfilling prophecy" (specifically, a "golem" effect), with potential prejudicial outcomes: on one hand, reinforcement of the negative representations about the immigrant parents and thus less likelihood of working positively with them, because they are discredited in advance and so easily pictured as "abdicating" (36); on the other hand, students' subjective disengagement from their relations with the school, as a strategy to preserve their self-image and to avoid confirming a negative stereotype of their cultural group (37).

Cultural Countertransference Leads to Misdiagnosing School Refusal as Truancy

Devereux theorized cultural countertransference as the sum total of an observer's implicit and explicit reactions, conscious and unconscious, to the observed object in a transcultural situation (38). For the purposes of this study, this includes all the conscious and unconscious prejudices and representations, both negative and positive, that school personnel of a given culture will experience when working with a youth or a family from another culture. These representations are organized around the tension between exclusion on the one hand, and the validation or even idealization of cultural difference, on the other. An example is how immigrant parents are sometimes treated as unfit by some personnel, who at the same time want to protect the children from their parents' supposed neglect. The cultural countertransference thus influences the perception as well as the reasoning of the participant—both underpinned by the affective polarization between rejection and validation.

School refusal is an interesting disorder for exploring the impact of cultural countertransference. When immigrant parents had not dared to contact the school personnel, their apparent failure to secure their child's attendance at school led the participants to the conclusion the student's behavior could only be defined as truancy. Thus, school refusal may well be misdiagnosed as truancy, according to Berg's criteria, when applied to children of migrant families. In this sense, the

participants of this study understood their migrant students' absenteeism as truancy instead of school refusal. Several lines of reasoning thus appear in these narratives about immigrant families and may yield various practical consequences. School personnel attribute intentionality to the immigrant families' positioning in relation to the school and consequently also ascribe to them responsibility for the school refusal. At the same time, however, they perceive a possible cultural determinism, which they may interpret as a social handicap, explained by failure to master the school's norms of conduct, because some families lack the explicit and implicit knowledge, attitudes, and skills required to communicate and interact with school personnel in a way the latter consider normal. For youths with transcultural backgrounds, the participants interpreted school absenteeism as a result of behavioral or mood problems, the family's lack of interest in school, language problems or poor grades. The sole exception was the English teacher of Iranian descent (participant n°5), who went to the trouble to call the family of a truant-like student and thus discovered that the youth was "petrified" by fear and presented with school refusal. The tension between these two opposing narratives thus reflects the complexity of the participants' work with immigrant families and their constant ambivalence.

School personnel's experiences with the unconventional behavior of families that do not share their school culture lead them to interpret it as deviance, whether intentional or determined. These opposing tensions are found too in their diagnosis of situations. From one perspective, they diagnose school refusal, accepting the idea of external determinants that overwhelm the youth and his or her family and thus a certain determinism. From another perspective, they consider the youth a school truant, a label that presupposes that he or she made a choice or is otherwise responsible for the situation. Thus, students with transcultural backgrounds can challenge the agreed-upon understanding of school refusal as taught to education professionals. The final diagnosis will of course depend very much on other factors along any given youth's pathway from school onward, including perhaps to a hospital. These include especially the mutual influence of the teachers, counselors, psychologists, doctors, and family members beside them. Finally, the cultural differences in these examples appear to be seen most often as a barrier to the school personnel's work, although they do not always block this work. Thus, participants, reporting being destabilized in their professional identities by their encounter with otherness, might act out their cultural countertransference aggressively, for example by promoting referral to court or social services, and simultaneously rationalize this decision.

Addressing Diversity to Help Immigrant Youth With School Refusal

Different subgroups in our research group focused on the viewpoints of school personnel, migrant parents (39), child psychiatrists (40) and adolescents (41), and their attitudes about school refusal in transcultural contexts. The results of this study of school personnel and their difficulties with children

presenting with school refusal in transcultural situations, mirror the findings of the groups studying parents, psychiatrists, and adolescents. As Rosenthal et al. stressed, the immigrant parents of children presenting with school refusal may have misrepresentations of the school and, of their child's difficulties and may also lack the cultural codes needed to interact effectively with school personnel or doctors.

Most of the transcultural contexts described by the participants expressed a negative vision of the students' culture, which was seen as an obstacle in their relationship to education. Payet (42) described the issue in dealing with ethnicity at school in France as a balance between overdetermination and invisibilization of otherness. On the public scene, strangeness cannot be openly talked about, whereas school personnel can talk about it "backstage". Moreover, the tension between this ideology and the work these personnel do in a daily life that is increasingly ethnicized risks promoting a hesitation between affirmation and stigmatization when talking about cultural differences (43). In color-blind societies, the tension between recognizing and ignoring questions of culture in schools might compromise the school achievement of young immigrants (44–46). Mansouri, for example, linked the school difficulties of immigrant youth whose parents were born in former French colonies (North Africa and sub-Saharan Africa) to a postcolonial dimension (47). Thus, two conditions might lead school personnel to develop discriminatory reasoning and youth to perceive discriminatory attitudes: 1) the unconscious symbolic violence (of the school personnel against the youth) inherited from the colonial past and reproduced in the "here and now" of the present relationship with the pupils; and 2) the youth's unconscious knowledge of this past, which he or she has received through transgenerational transmission. The youngster's subsequent feeling that the egalitarian ideal has been betrayed could create a dominant/dominated relationship mirroring the colonizer/colonized (or master/slave) relationship (48).

However, some participants creatively implemented new ways to deal with these situations, by using the cultural difference for mediation. They thereby demonstrated that the outcome of working with immigrant families is not a foregone (negative) conclusion. Many participants experienced problems with students with transcultural backgrounds, including those displaying SAPs, differently than they did their usual work and developed new strategies to deal with it. Exploring this dimension in the standardized assessment scales exploring school environment, such as ISAP (49), might enhance their clinical efficacy, by giving a clearer picture of each situation, and especially of the interactions between the youth and the school personnel. Including a transcultural dimension in early intervention programs, such as for psychosis (50, 51), involves an adaptation of the standardized clinical tools (52) and institutions (53). Moreover, theoretical support in recognizing and dealing with transcultural contexts should be developed for personnel, first in their training courses and second by setting up practical guidelines, following examples already existing in the psychiatric field, such as the Cultural Formulation Interview (54, 55). Afterwards, these same school personnel might usefully be

offered close psychological supervision or intervention at their workplace. Finally, the use of professional interpreters should be systematized in cases of linguistic barriers.

Differences Between Paris and Franche-Comté: The French Colonial History

Our study found clear differences between the situations recounted by the participants in Paris and in Bourgogne Franche-Comté. Several factors might explain this contrast. The first is that the context of migration differs substantially between the two areas, with many fewer migrants in Bourgogne Franche-Comté than in the Paris basin (56, 57).

Second, migrant profiles vary notably between these locations. In Bourgogne, the most common young migrants are first-generation political refugees, without their parents, and travelers, the latter now long settled in Bourgogne, with uniquely seasonal moving. Participants' difficulties in talking about the culture of the others appeared more obvious in Paris, where the immigrant youth encountered were mostly from countries that share a history of colonization by France (North Africa and sub-Saharan Africa). This colonial past remains today a very sensitive issue in France, as illustrated by the sparse development of postcolonial studies, compared with other former colonial powers.

Third, institutional support appears to be different. In Bourgogne, participants described substantial support for the refugees from local organizations and the parents of other pupils. For example, school officials often placed them in elite international classes, along with youth from United States and Australia in France for exchange programs.

Strengths and Limitations

Our study had several strengths. The choice of the subjects interviewed was original and important, because understanding the perspectives and attitudes of school personnel is key to developing interventions that could ensure equality of opportunity to immigrants in schools. Also, the rigorous GT-based analysis was most appropriate to its topic. An important limitation of our study is that it was unable to assess in detail the differences between immigrant families and others. It might have been useful to include school personnel from the more socially disadvantaged suburbs of Paris. This would have allowed us, for example, to give voice to those working in sensitive areas, in "réseaux d'éducation prioritaire (REP)" (high-priority education networks), that is, districts where social difficulties strongly affect academic achievement (58). The school personnel in these districts are more likely to encounter and deal with immigrant families, who often live in these areas. They would not only have had more transcultural contexts to talk about, but would also have been able to make comparisons that would have enabled a more specific focus on the differences between immigrant families and other disadvantaged families.

Implications

Examination of misconceptions about the absenteeism of children from transcultural backgrounds (migrant children or

children from immigrant families) is essential for ensuring equality of opportunity to immigrants in schools in France, Europe, and elsewhere. This research could usefully be extended by including an assessment of transcultural dimensions in the classification of SAPs, especially school refusal. Our results show the need to improve the training of teachers and other school staff to make them aware of students' diversity, to take staff cultural countertransference into account, and to implement transcultural skills in their theoretical training. It also suggests the utility of helping parents to share their efforts to secure their child's attendance with school personnel by promoting the use of professional interpreters during encounters with families with transcultural backgrounds. Finally, these findings also suggest that reflexive practices and creative strategies by school personnel can be supported by setting up close supervision or interventions in the workplace.

CONCLUSION

This study describes the ambivalence and the difficulties experienced by school personnel facing school absenteeism of children with transcultural backgrounds. School absenteeism by these children challenges the usual practices of school personnel. When coping with these unusual situations, school personnel are unsettled by families' school cultures, which differ from what they expect. Many participants tried to describe and understand the students' absenteeism without openly addressing their culture. Their misconceptions about these students may lead to misdiagnosis for youths whose school absenteeism might be incorrectly labeled as truancy rather than school refusal. The consideration of parental "reasonable efforts" already takes different parenting styles into account, but continues to overlook cultural factors that can cause the misunderstanding of the youth's behavior and of their parents' attitudes toward school attendance. These feelings reflect the tension between the ideology of a secular Republic and the reality of the school personnel's daily lives, which are becoming increasingly ethnicized. Nonetheless, the creative strategies that school personnel report developing demonstrate that that cultural barriers can be overcome and that unconscious discrimination is not inevitable.

This situation calls for a major change in the understanding of cultural differences in color-blind societies. In the meantime, more local solutions could be attempted. Practices might be

improved by developing transcultural theoretical training for professionals working in the area of school absenteeism among students with such backgrounds. Second, in the research field, the assessment of transcultural dimensions should be included in standardized diagnostic tools that aim to differentiate school refusal from other SAPs (truancy, school withdrawal, and school exclusion) to ensure equality of access to services for immigrants in schools, including equality of referral to health care services when needed.

DATA AVAILABILITY STATEMENT

All datasets generated for this study are included in the article/supplementary material.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by The Competent Institutional Review Board of the Inserm "Comité d'Evaluation Ethique de l'Inserm (CEEI—IRB00003888). The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

The study was designed by LB, who also asked the competent institutional review board of the Inserm (Comité d'Éthique de l'Inserm) to approve it. All respondents were interviewed by one of the two researchers (RM and LB). Both of them independently coded all interviews. The triangulation of the analysis, which guarantees the quality of individual coding, took place during monthly meetings of our research group (LB, RM, JB, and MM).

FUNDING

This study received funding from the French National Institute of Health and Medical Research (Inserm) through LB's PhD grant and from private contributors through the Thellie Foundation for the project "Understanding pathways to care in school refusal and improving them".

REFERENCES

- Kearney CA, Silverman WK. Family environment of youngsters with school refusal behavior: A synopsis with implications for assessment and treatment. *Am J Fam Ther* (1995) 23(1):59–72. doi: 10.1080/01926189508251336
- Catheline N. *Psychopathologie de la scolarité. 3rd Edition*. Issy-les-Moulineaux: Elsevier Masson. (2012).
- Johnson A, Falstein E, Szurek SA, Svendsen M. School phobia. *Am J Orthopsychiatry* (1941) 11(4):702–11. doi: 10.1111/j.1939-0025.1941.tb05860.x
- Holzer L, Halfon O. Le refus scolaire. *Arch Pédiatrie* (2006) 13(9):1252–8. doi: 10.1016/j.arcped.2006.05.010
- Kearney C. School absenteeism and school refusal behavior in youth: A contemporary review. *Clin Psychol Rev* (2008) 28(3):451–71. doi: 10.1016/j.cpr.2007.07.012
- King N, Bernstein G. School Refusal in Children and Adolescents: A Review of the Past 10 Years. *J Am Acad Child Adolesc Psychiatry* (2001) 40(2):197–205. doi: 10.1097/00004583-200102000-00014

7. Suveg C, Aschenbrand S, Kendall P. Separation Anxiety Disorder, Panic Disorder, and School Refusal. *Child Adolesc Psychiatr Clin N Am* (2005) 14 (4):773–95. doi: 10.1016/j.chc.2005.05.005
8. Kearney C. Forms and functions of school refusal behavior in youth: an empirical analysis of absenteeism severity. *J Child Psychol Psychiatry* (2007) 48(1):53–61. doi: 10.1111/j.1469-7610.2006.01634.x
9. Heyne D, Gren-Landell M, Melvin G, Gentle-Genitty C. Differentiation Between School Attendance Problems: Why and How? *Cognit Behav Pract févr* (2019) 26(1):8–34. doi: 10.1016/j.cbpra.2018.03.006
10. Bools C, Foster J, Brown I, Berg I. The identification of psychiatric disorders in children who fail to attend school: a cluster analysis of a non-clinical population. *Psychol Med* (1990) 20(1):171–81. doi: 10.1017/S0033291700013350
11. Benoit L, Barreteau S, Moro MR. Phobie scolaire chez l'adolescent migrant, la construction identitaire dans une approche transculturelle. *Neuropsychiatr Enfance Adolesc.* (2015) 63(2):84–90. doi: 10.1016/j.neurenf.2014.05.001
12. Goudet B, Hemdane A, Benoit de Coignac A, Baubet T. Aspects transculturels de la phobie scolaire. *Soins PédiatriePuériculture.* (2012) 33(267):31–3. doi: 10.1016/j.spp.2012.05.007
13. Inglés C, González-Maciá C, García-Fernández J, Vicent M, Martínez-Monteaugudo M. Current status of research on school refusal. *Eur J Educ Psychol* (2015) 8(1):37–52. doi: 10.1016/j.ejeps.2015.10.005
14. Thambirajah M, Grandison K, De-Hayes L. *Understanding school refusal: a handbook for professionals in education, health and social care.* London Philadelphia: Jessica Kingsley Publishers; (2008). 160 p.
15. Maynard BR, Vaughn MG, Nelson EJ, Salas-Wright CP, Heyne DA, Kremer KP. Truancy in the United States: Examining temporal trends and correlates by race, age, and gender. *Child Youth Serv Rev* (2017) 81:188–96. doi: 10.1016/j.childyouth.2017.08.008
16. Yang K-E, Ham S-H. Truancy as systemic discrimination: Anti-discrimination legislation and its effect on school attendance among immigrant children. *Soc Sci J* (2017) 54(2):216–26. doi: 10.1016/j.soscij.2017.02.001
17. Bourdieu P, Passeron J. *Les héritiers: les étudiants et la culture.* Paris: Les Éditions de Minuit; (1994). p. 189. (Le sens commun).
18. Beauchemin C, Hamel C, Simon P, Héran F eds. *Trajectoires et origines: enquête sur la diversité des populations en France.* Paris: Ined ditions; (2015). 622 p. (Grandes enquêtes).
19. Moro MR, Peiron J, Peiron D. *Enfants de l'immigration, une chance pour l'école: entretiens avec Joanna et Denis Peiron.* Bayard. Paris; (2012).
20. Huss-Keeler R. Teacher perception of ethnic and linguistic minority parental involvement and its relationships to children's language and literacy learning: A case study. *Teach Teach Educ* (1997) 13(2):171–82. doi: 10.1016/S0742-051X(96)00018-2
21. Hernández Sheets R. Urban classroom conflict: Student-teacher perception: Ethnic integrity, solidarity, and resistance. *Urban Rev* (1996) 28(2):165–83. doi: 10.1007/BF02354383
22. Franklin CG, Soto I. Keeping Hispanic youths in school. *Child Sch.* (2002) 24 (3):139. doi: 10.1093/cs/24.3.139
23. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care* (2007) 19(6):349–57. doi: 10.1093/intqhc/mzm042
24. Glaser B, Strauss A. *The discovery of grounded theory: strategies for qualitative research. 11. printing.* New York: Aldine; (1967). 271 p.
25. Patton M. *Qualitative research & evaluation methods. 3. ed.* Thousand Oaks, Calif: Sage; (2009). 127 p.
26. Ministère de l'Éducation Nationale. Direction de l'évaluation, de la prospective et de la performance. *L'éducation nationale en chiffres 2018.* 2018.
27. Berg I. School refusal and truancy. *Arch Dis Child* (1997) 76(2):90–1. doi: 10.1136/adc.76.2.90
28. Corbin J, Strauss A. *Basics of qualitative research: Techniques and procedures for developing grounded theory.* Los Angeles, California: SAGE Publications (2014) p. 6–8.
29. Benoit L, Cottin P, Moro MR. What is a “Maison des Adolescents”? A history of integrated youth health care services in France. *Early Interv Psychiatry* (2018) 12(5):1000–5. doi: 10.1111/eip.12680
30. Hetrick SE, Bailey AP, Smith KE, Malla A, Mathias S, Singh SP, et al. Integrated (one-stop shop) youth health care: best available evidence and future directions. *Med J Aust* (2017) 207(10):S5–18. doi: 10.5694/mja17.00694
31. El Hussein M, Skandrani S, Sahab LT, Dozio E, Moro MR. Countertransference in Trauma Clinic: A Transitional Breach in the Therapists' Identity. In: El-Baalbaki G, Fortin C, editors. *A Multidimensional Approach to Post-Traumatic Stress Disorder - from Theory to Practice.* IntechOpen, doi: 10.5772/64842. Available from: <https://www.intechopen.com/books/a-multidimensional-approach-to-post-traumatic-stress-disorder-from-theory-to-practice/countertransference-in-trauma-clinic-a-transitional-breach-in-the-therapists-identity>
32. Lahire B. *L'homme pluriel: les ressorts de l'action.* Paris: Nathan (1998).
33. Lahire B. *Tableaux de familles: heurs et malheurs scolaires en milieux populaires.* Paris: Le Seuil / Gallimard (1995). p. 297. (Hautes études).
34. Delanoë D. Les châtiments corporels de l'enfant, une forme élémentaire de la domination. *L'Autre* (2015) 16(1):48. doi: 10.3917/la.046.0048
35. Moro M. *Enfants dici venus d'ailleurs: naître et grandir en France.* Paris: La Découverte; (2002).
36. Payet J. L'école à l'épreuve de la réparation sociale: la relation professionnels/public dans les établissements scolaires de banlieue. *Rev Fr Pédagogie* (1994) 109(1):7–17. doi: 10.3406/rfp.1994.1243
37. Dagot L. Menace du stéréotype et performance motivationnelle: le cas des demandeurs d'emploi. *L'Orientat Sc Prof.* (2007) 36(3):343–56. doi: 10.4000/osp.1452
38. Devereux G, La Barre W. *From Anxiety to Method in the Behavioral Sciences.* Berlin: De Gruyter Mouton; (1967).
39. Rosenthal L, Moro MR, Benoit L. Migrant Parents of Adolescents With School Refusal: A Qualitative Study of Parental Distress and Cultural Barriers in Access to Care. *Front Psychiatry* (2020) 10. doi: 10.3389/fpsy.2019.00942
40. Deriu V, Moro MR, Benoit L. Making use of cultural skills for school refusal management: a qualitative study of health care professionals [M.Sc Psychology]. [Université St Denis Villeteuse]; 2019.
41. Brault C, Moro MR, Benoit L. Immigrant youths: their experience of school refusal. A qualitative study [M.Sc Psychology]. Université Saint Denis; 2019.
42. Payet J. *Colleges de banlieue: ethnographie dun monde scolaire.* Paris: Armand Colin; (1997).
43. Perrotton J. Les dimensions ethniques de l'expérience scolaire. *Année Sociol* 1940-1948-. (2000) 50(2):437–67.
44. Roussier-Fusco E. *L'école primaire à l'épreuve de l'ethnicité: des politiques éducatives aux pratiques dans la salle de classe.* Paris: Institut d'Études Politiques; (2007).
45. Benoit L, Harf A, Skandrani S, Moro MR. Adoption internationale: le point de vue des adoptés sur leurs appartenances culturelles. *Neuropsychiatr Enfance Adolesc* (2015) 63(6):413–21. doi: 10.1016/j.neurenf.2015.04.008
46. Benoit L, Harf A, Sarmiento L, Skandrani S, Moro MR. Shifting views and building bonds: Narratives of internationally adopted children about their dual culture. *Transcult Psychiatry* (2018) 55(3):405–27. doi: 10.1177/1363461518764250
47. Mansouri M. *Révoltes postcoloniales au cœur de l'Hexagone: voix d'adolescents.* Paris: Presses universitaires de France; (2013). 193 p. (Partage du savoir).
48. Sarot A. *Pourquoi n'ont-ils pas appris à lire? Analyse transculturelle des facteurs de vulnérabilité et de protection dans le rapport aux savoirs.* Paris Descartes; (2016).
49. Knollmann M, Reissner V, Hebebrand J. Towards a comprehensive assessment of school absenteeism: development and initial validation of the inventory of school attendance problems. *Eur Child Adolesc Psychiatry* (2019) 28(3):399–414. doi: 10.1007/s00787-018-1204-2
50. Benoit L, Moro MR, Falissard B, Henckes N. Psychosis risk research versus daily prognosis uncertainties: A qualitative study of French youth psychiatrists' attitudes toward predictive practices. *PloS One* (2017) 12(7). doi: 10.1371/journal.pone.0179849
51. Benoit L, Russo T, Barry C, Falissard B, Henckes N. You have to believe in something”: Risk of psychosis and psychiatrists' beliefs in the self-fulfilling prophecy. *Soc Sci Med* (2019) 230:20–9. doi: 10.1016/j.socscimed.2019.03.035
52. Deriu V, Moro M, Benoit L. Early intervention for everyone? A review of cross-cultural issues and their treatment in ultra-high-risk (UHR) cohorts. *Early Interv Psychiatry* (2018) 12(5):796–810. doi: 10.1111/eip.12671
53. Benoit L. L'adolescent “fragile”, peut-on prédire en psychiatrie?. Paris: Recherches. (2016).
54. Martin R, Moro M, Benoit L. Is early management of psychosis designed for migrants? Improving transcultural variable collection when measuring duration of untreated psychosis. *Early Interv Psychiatry* (2019) 13(3):347–57. doi: 10.1111/eip.12701

55. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders: DSM-5*. 5. ed. Washington, DC: American Psychiatric Publishing; (2013). p. 947.
56. Mezzich J, Caracci G, Fabrega H, Kirmayer L. Cultural Formulation Guidelines. *Transcult Psychiatry* (2009) 46(3):383–405. doi: 10.1177/1363461509342942
57. Brutel C. *La localisation géographique des immigrés - Une forte concentration dans laire urbaine de Paris*. (2016). 1591. Insee Prem [Internet]. Disponible sur: <https://www.insee.fr/fr/statistiques/2121524>
58. Leger M, Brion D. Les immigrés, une population urbaine. (2016). 7Insee Flash [Internet]. Disponible sur: <https://www.insee.fr/fr/statistiques/2019708>

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2020 Martin, Benoit, Moro and Benoit. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



Corrigendum: School Refusal or Truancy? A Qualitative Study of Misconceptions Among School Personnel About Absenteeism of Children From Immigrant Families

Robin Martin¹, Jean Pierre Benoit¹, Marie Rose Moro^{2,3,4} and Laelia Benoit^{2,3,4*}

¹ Maison des Adolescents de Saint-Denis, Saint-Denis Hospital, Saint Denis, France, ² Maison des Adolescents–Maison de Solenn, Hôpital Cochin, APHP, Paris, France, ³ University of Paris, Medical School, Faculty of Psychology, PCPP, Boulogne-Billancourt, France, ⁴ Center for Research in Epidemiology and Population Health (CESP), Paris-Sud and UVSQ Medical Schools, French National Institute of Health and Medical Research (Inserm), Team DevPsy, Villejuif, France

OPEN ACCESS

Approved by:

Frontiers Editorial Office, Frontiers
Media SA, Switzerland

*Correspondence:

Laelia Benoit
laelia.benoit@inserm.fr

Specialty section:

This article was submitted to
Child and Adolescent Psychiatry,
a section of the journal
Frontiers in Psychiatry

Received: 24 March 2020

Accepted: 25 March 2020

Published: 23 April 2020

Citation:

Martin R, Benoit JP, Moro MR and Benoit L (2020) Corrigendum: School Refusal or Truancy? A Qualitative Study of Misconceptions Among School Personnel About Absenteeism of Children From Immigrant Families. *Front. Psychiatry* 11:300. doi: 10.3389/fpsy.2020.00300

Keywords: school refusal, truancy, teacher, school personnel, immigrant youth, minorities, discrimination, school absenteeism

A Corrigendum on

School Refusal or Truancy? A Qualitative Study of Misconceptions Among School Personnel About Absenteeism of Children From Immigrant Families

by Martin R, Benoit JP, Moro MR and Benoit L (2020). *Front. Psychiatry* 10:4202. doi: 10.3389/fpsy.2020.00202

In the original article, there was a mistake in the title as published. The first part of the title “School Refusal or Truancy?” was missing in the final version. The complete title appears above. The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way.

The original article has been updated.

Copyright © 2020 Martin, Benoit, Moro and Benoit. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



Feasibility Study of Back2School, a Modular Cognitive Behavioral Intervention for Youth With School Attendance Problems

Johanne Jeppesen Lomholt^{1,2*}, Daniel Bach Johnsen¹, Wendy K. Silverman³, David Heyne⁴, Pia Jeppesen^{5,6} and Mikael Thastum¹

OPEN ACCESS

Edited by:

Meryem Yilmaz Soylu,
University of Nebraska–Lincoln,
United States

Reviewed by:

Tony Kuo,
UCLA Fielding School of Public
Health, United States
Gianluca Serafini,
San Martino Hospital (IRCCS), Italy
Mohamed A. Ali,
Grand Canyon University,
United States

*Correspondence:

Johanne Jeppesen Lomholt
johanhj@psy.au.dk

Specialty section:

This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Psychology

Received: 14 August 2019

Accepted: 12 March 2020

Published: 06 April 2020

Citation:

Lomholt JJ, Johnsen DB,
Silverman WK, Heyne D, Jeppesen P
and Thastum M (2020) Feasibility
Study of Back2School, a Modular
Cognitive Behavioral Intervention
for Youth With School Attendance
Problems. *Front. Psychol.* 11:586.
doi: 10.3389/fpsyg.2020.00586

¹ Department of Psychology and Behavioural Sciences, Aarhus University, Aarhus, Denmark, ² TrygFonden's Centre for Child Research, Aarhus University, Aarhus, Denmark, ³ Yale University Child Study Center, New Haven, CT, United States,

⁴ Institute of Psychology, Leiden University, Leiden, Netherlands, ⁵ Child and Adolescent Mental Health Center, Mental Health Services – Capital Region of Denmark, Gentofte, Denmark, ⁶ Department of Clinical Medicine, Faculty of Health and Medical Sciences, University of Copenhagen, Copenhagen, Denmark

There is large heterogeneity among youth with school attendance problems (SAPs). For this reason, protocols for the treatment of SAPs need to be flexible. Back2School (B2S) is a new manual-based, modular transdiagnostic cognitive behavioral intervention to increase school attendance among youth with SAPs. It also aims to increase the self-efficacy of these youth and their parents. B2S includes evidence-based modules addressing youth anxiety, depression, and behavior problems, together with modules focused on parent guidance and school consultation. The current study examined the feasibility of evaluating B2S in a randomized controlled trial and acceptability of the B2S program in a non-randomized trial, including both qualitative and quantitative data, in preparation for a randomized controlled trial of its effectiveness. Youth, parents, and teachers completed questionnaires at baseline, post-intervention, and follow-up. School attendance data were collected from school registers. Twenty-four youth with a SAP (defined as more than 10% absenteeism during the last 3 months) were recruited from primary and lower secondary schools in Aarhus Municipality, Denmark. Their parents also participated in B2S. Two of the 24 families withdrew during the intervention, after sessions two and six respectively. Of the remaining 22 families, 19 (86%) completed all 10 sessions. Parents and youth rated their satisfaction with B2S as high, and high levels of satisfaction were maintained 1 year after the intervention. Teacher satisfaction was lower than that of youth and parents, but the majority found the school's participation in the intervention helpful. Preliminary evaluation of intervention outcomes showed significant increase in school attendance and decrease in psychological symptoms, as well as a significant increase in self-efficacy for both youth and parents. Based on this feasibility data, adaptations were made to the B2S manual and study procedures prior

to commencement of a randomized controlled effectiveness trial. The main adaptation to the manual was to increase school consultation. The main procedural adaptation was to broaden recruitment. Furthermore, it was necessary to increase level of staffing by psychologists because treatment delivery was more time consuming than expected.

Keywords: Back2School, school attendance problems, cognitive behavioral therapy, transdiagnostic, feasibility, acceptability, youths

INTRODUCTION

The school context is important for youths' academic development and the development of their social-emotional competencies (Kearney and Graczyk, 2014). School absenteeism has a negative impact on development in these areas (Carroll, 2010; Gottfried, 2014). Long-term school absenteeism increases a youth's risk of early school dropout, which increases the risk of employment, financial, social, and health issues in adulthood (Attwood and Croll, 2006; Christle et al., 2007; Kearney, 2008b).

In the United States and United Kingdom there has been an increase in the number of students with chronic absenteeism (i.e., more than ten percent; Chang et al., 2018; Department for Education, 2019). The increase in absenteeism is also seen in Danish schools. On average, Danish students in elementary and lower secondary school are absent from school 12 days each school year (six percent of school days), representing an increase since 2014/2015 of one whole day of absenteeism (Undervisningsministeriet, 2018). More specifically, there has been a decrease in lower levels of absenteeism (i.e., 0–2% absenteeism) and an increase in higher levels of absenteeism (i.e., more than 10% absenteeism during a school year) (Undervisningsministeriet, 2018).

School attendance problems (SAP) encompasses different types of problematic school absenteeism. There is large heterogeneity among youths with SAPs, whereby etiology, associated psychopathology, and presentation vary according to the type of SAP (e.g., Kearney, 2008a; Heyne et al., 2019). Customarily, interventions to improve school attendance have focused on one specific type of SAP, such as school refusal alone or truancy alone. Moreover, the effectiveness of these interventions has mainly been examined in small-scale studies or without a randomized controlled design (Maynard et al., 2013, 2015).

A functional approach has been developed to address the heterogeneity associated with SAPs. It involves identifying the motivational function of a youth's SAP, including two motivational functions referring to negative reinforcement such as avoidance of school-based situations or escape from aversive social and evaluative situations, and two motivational functions referring to positive reinforcement such as pursuit of attention from significant others or outside school (Kearney and Silverman, 1993). The functional approach attempts to covers all youth with problematic absenteeism and are linked to an assessment covering both the form and function of SAPs as well as providing treatment strategies targeting different reasons for SAPs. "When Children Refuse School" comprises interventions for absenteeism based on this functional approach, with four protocols to

address the four motivational functions (Kearney and Albano, 2007). The strength of the program is the focus on different functions of SAPs. However, the program does not involve interventions at the school.

An intervention which is relevant for different types of SAPs needs to be flexible, containing intervention components most relevant to those different types. There are several risk factors for SAPs related to contexts of the youth as the family context and school context (Kearney, 2008b). These contexts are therefore relevant to take into account in an intervention for SAPs.

Studies have found significant associations between youth with SAPs related to school refusal and internalizing symptoms and emotional disorders (Bools et al., 1990; Egger et al., 2003). For youth with SAPs classified as truancy an association with externalizing problems has been found including a higher frequency of conduct disorder (Bools et al., 1990; Egger et al., 2003; Vaughn et al., 2013). However, despite the link between school refusal and internalizing behavior, depression-related internalizing behavior is not only linked to youth with school refusal, as a link between truancy and depression has been found as well (Roeser et al., 1998; Egger et al., 2003; Heyne et al., 2019).

We developed the Back2School program (B2S; Thastum and Arendt, 2017) which is a modular transdiagnostic CBT intervention aimed at increasing school attendance and decreasing anxiety, depression, and/or behavior problems among youth with SAPs. B2S has a systemic approach involving both the family and the school in the program. Improvement in youth self-efficacy for school-related situations is also targeted in the B2S program because low self-efficacy appears to be related to SAPs (Heyne et al., 1998; Maric et al., 2013; Mann et al., 2015) and an increase in self-efficacy may have a positive impact on school attendance (Heyne et al., 2015).

Aim

The objectives of the current study were to examine the feasibility of evaluating B2S in an RCT and acceptability of the B2S program in a non-randomized trial, including both qualitative and quantitative data. The results would be used to inform a subsequent randomized controlled trial (RCT) of the efficacy of the B2S program. A feasibility study provides valuable information about improvements that may need to occur before initiating a larger RCT, thereby improving the quality and integrity of the RCT (Orsmond and Cohn, 2015). The feasibility of evaluating B2S in an RCT was examined with respect to: recruitment capability and the resulting sample characteristics; data gathering procedures, including the suitability of selected outcome measures based on response rate and comprehension level; the acceptability of the intervention

and study procedures; and the resources needed to implement the study and intervention. The feasibility study also served as a preliminary evaluation of the impact of the intervention. In these ways, the current study followed the model for feasibility studies as proposed by Orsmond and Cohn (2015). In their review of methods associated with feasibility studies, they identified five overarching objectives, which we have also adopted, namely the evaluation of: recruitment capability and resulting sample characteristics; data collection procedures and outcome measures; acceptability of the intervention and study procedures; ability to manage and implement the study and its intervention; and initial responses to the intervention.

MATERIALS AND METHODS

Participants

We estimated that 24 families would need to be included in the feasibility study to ensure that all five therapists and 12 co-therapists could gain experience delivering the B2S program with at least two cases. Thus, the current sample consisted of 24 youths with SAPs, and their parents. Inclusion criteria for the participating youths were: (1) enrollment in a public school within Aarhus Municipality; (2) aged 7–16 years and in 0–9th grade (excluding second semester of ninth grade); (3) parent reported more than 10% school absenteeism during the last 3 months of school; (4) the youth and at least one of the parents understood and spoke Danish sufficiently to complete questionnaires and participate in the intervention; (5) commitment from both the youth and at least one parent to participate in assessment and intervention procedures; and (6) written informed consent provided by the holders of the parental rights and responsibilities. Regarding the first criterion, private schools were not included because within Aarhus Municipality private schools are outside the municipality's jurisdiction, rendering school absenteeism data unavailable. Regarding the second criterion, youth in their second semester of ninth grade were excluded because this is the final semester in Danish public schools, after which Aarhus municipality cannot provide absenteeism data.

Procedure

The study was conducted in collaboration between Aarhus University and Aarhus Municipality, Denmark. The intervention was managed by the Center for Psychological Treatment for Children and Adolescents (CEBU) at Aarhus University. The feasibility study was conducted in the spring of 2017.

The families were required to make initial contact with CEBU to participate in the study. Prior to the start of the study, the municipality implemented widespread and extensive information campaigns aimed at families and professionals within the municipality. The suitability of each family, with respect to study inclusion criteria, was initially assessed by the first or last author based on a brief e-mail sent by the family. The email described the youth's problems regarding school attendance, as well as an estimate of the youth's absenteeism from school during the last 3 months. Families deemed eligible received information

about the project verbally (by telephone) and then in written form by mail. All parents signed an informed consent form for participation. Included in the consent was permission for the investigators to contact the school and involve the school in the intervention. The youth and one of the parents completed questionnaires administered at four assessment points (baseline, post-intervention, 3-month follow-up, and 12-month follow-up). It was optional which parent completed the questionnaires, but ultimately it was the mothers who completed the questionnaires at all assessment points. The main teacher for the youth also completed questionnaires at three assessment points (baseline, post-intervention, 3-month follow-up). All questionnaires were administered electronically.

Intervention

The B2S program (Thastum and Arendt, 2017) is a manualized CBT program developed for this study to increase school attendance among youth with SAPs. It was used together with a modular transdiagnostic CBT manual called MindMyMind (MMM; Jeppesen, 2017). The MMM manual includes modules of evidence-based CBT targeting subclinical or clinical levels of anxiety, depression, behavioral disturbance, and trauma-related problems. The MMM manual served as a supplement to the B2S manual, inasmuch as the B2S manual indicated when relevant modules and materials from the MMM manual should be used. Therefore, when referring to the B2S program and intervention in this study it refers to the B2S manual supplemented by the MMM manual.

As previously described (Thastum et al., 2019), the B2S intervention is based on a descriptive functional analysis obtained by the School Refusal Assessment Scale (SRAS) (Kearney and Silverman, 1993) together with a case formulation approach to planning CBT for attendance problems. According to B2S, SAPs motivated by positive reinforcement require CBT procedures such as parent management, contingency management, and contracting to minimize incentives for school absenteeism and boost incentives for attendance. SAPs motivated by negative reinforcement require CBT procedures such as cognitive restructuring and exposure-based practice to reduce the youth's anxious or depressive physical sensations and thoughts. In the development of the intervention, we were guided in part by “the @School program” (Heyne et al., 2014) and the “When Children Refuse School program” (Kearney and Albano, 2007). The @school program informed the collaboration with school staff during regular meetings at the school (e.g., preparing the youth for return to school) and how to address parent motivation. The “When Children Refuse School” program informed the flexible use of different modules depending on the youth's underlying problems, as well as the role of negative and positive reinforcement.

Each family receiving the B2S intervention was treated by one psychologist and one co-therapist. The psychologists were employed as school psychologists in Aarhus Municipality or as clinical psychologists at CEBU. Graduate students in clinical psychology at CEBU functioned as co-therapists. All psychologists and co-therapists participated in a 6-day training

course and received weekly face-to-face group case supervision by specialists in clinical child psychology.

Before the intervention, youth and parents participated in a 1.5-h structured assessment interview held by the appointed therapists to get an understanding of the youth's development, family and social situation, SAPs, and functioning in daily life. The interview also included a brief, semi-structured psychopathological interview with the youth and parents together. This interview was based on a psychopathological interview developed for MMM but included questions about the youth's SAPs. The youth did not receive a psychiatric diagnosis following the assessment, but based on the information derived from the interview and the questionnaires, a case formulation was developed by the therapists. The structure of the case-formulation was based on the framework by Carr (2006), where factors related to the development and maintenance of the youth's problem were included in the case-formulation. These factors were related to predisposing factors, maintaining factors, protective factors, and precipitating factors (Carr, 2006). The case-formulation was discussed with a clinical psychologist at CEBU, and a preliminary treatment plan was constructed.

The B2S intervention consisted of ten 1-h sessions with the youth and parents together, except for sessions two and six, which were only with the parents. Additional, the B2S intervention consisted of a 1-h booster session with the youth and parents together which were flexible but recommended to be 1–3 months after the last session. Finally the B2S intervention consisted of four school meetings. At week one and two of the intervention there were two sessions per week to speed up the change process. The following six sessions could optionally be scheduled weekly or biweekly as decided by the therapist and the family together.

An important part of the B2S intervention is the collaboration with the school. In addition to the B2S sessions with the family, there were four meetings with relevant school officials from the youth's school, the therapists, and the parents. The meetings were held at the youth's school in the beginning, the middle, and the end of the intervention, as well as shortly after the booster session. **Table 1** presents an overview of the intervention.

Feasibility Measures

Sample Characteristics

Measures were collected at baseline, post, 3-months follow-up, and 12-months follow-up. At baseline, parents completed questions regarding family demographics, socioeconomic status, and the youths' and parents' mental and physical health. At post, 3-months follow-up, and 12-months follow-up, the parents were asked to report if there were changes to their background information. Also at baseline, youth and parents provided a functional assessment of the youth's SAPs by completing an adapted version of the *School Refusal Assessment Scale-revised* (SRAS-R; Kearney, 2002; Heyne et al., 2017). The SRAS-R includes four subscales each representing a functional condition of school refusal in youths: (1) avoid stimuli that provoke negative affectivity, (2) escape aversive social and/or evaluative situations, (3) pursue attention from significant others, and/or (4) pursue tangible re-enforcers outside of school. The SRAS-R consists

of a youth and parent version, both including 24 items rated on a 7-point scale ranging from 0 to 6. The function with the highest combined score from both the youth and parent version is classified as the primary function of the SAPs and are hypothesized to be the primary maintaining variable of the youth's SAPs. Functional scores within 0.25 points of one another are considered equivalent (Kearney et al., 2004).

Evaluation of Data Gathering Feasibility

Response rate for completing the questionnaires for all informants were evaluated at each data collection point.

Resources to Implement the Study

The intervention and study procedure were evaluated at post with the psychologists, and staff at CEBU. The average number of hours the psychologists spent on working with the families were reported as well.

Acceptability of Intervention and Study Procedures

Acceptability was measured with respect to: (a) the intervention, and (b) the study procedures. Participant's dropout rate, session attendance, and duration of the intervention were registered.

Youths, parents, and teachers completed items related to treatment satisfaction at post-intervention. All items were rated on a 3-point scale: (0) "Not True," (1) "Partly True," and (2) "True." For qualitative feedback about the program, open-ended questions were included to allow the participants to comment freely on what worked well and what needed to be improved in the B2S program.

At 12-month follow-up, youths and parents rated their satisfaction on the same 3-point scale and responded to open-ended questions about the family's continuing use of strategies acquired in the B2S intervention.

Measures Regarding Preliminary Outcome of the Intervention

The following measures were included as a part of the preliminary evaluation of B2S. The measures were planned to be outcomes in the RCT:

Primary Outcomes

School absenteeism

School absenteeism was measured using two different types of data. First, *school absenteeism (registry) data* were drawn from official school absenteeism records collected by the schools, provided by the municipality. The absenteeism score was calculated as a percentage of absenteeism in each of the following periods: (a) 4 weeks before the baseline questionnaires (baseline score); (b) 4 weeks after the post-intervention questionnaires (post score); (c) 2 weeks after the 3-month follow-up questionnaires (3-months follow-up score); and (d) 2 weeks after the 12-month follow-up questionnaires (12-months follow-up score).

Second, *school absenteeism (parent-report) data* was based on parent reports of the youth's school-absenteeism at three occasions: (1) parents retrospectively reported the amount of school absenteeism the youths had the previous 3 months before

TABLE 1 | Overview of the Back2School program.

Session number	Duration (hours)	Participants	Session content
S-0	1.5	T, C, P	Structured assessment interview with the family conducted by the therapists (a clinical psychologist and a clinical psychology graduate student). The family receive handouts regarding psychoeducation and SMART goals as homework for session 1.
Clinical conference	1	T	The therapists are discussing the case formulation, choice of treatment modules, and treatment goals with a clinical psychologist at CEBU
S-1	1	T, C, P	Presenting and discussing the case-formulation with the family. Psychoeducation regarding school absence, and development of SMART goals.
S-2	1	T, P	Parent only session 1. Helping the parents to clarify and solve potential questions/problems regarding school placement, somatic symptoms in child, and parental motivation for change. Planning better routines at home. Working with potential sleep problems.
S-3	1	T, C, P	Planning the date for returning to school, and planning the first day back in school. Creating a gradual exposure plan for returning to school.
S-4	1	T, C, P	Psychoeducation regarding the youth's primary problem related to school absence (anxiety, depression, or behavioral problems) by including the MMM Modules. Continuing work with the gradual exposure plan for returning to school.
S-5	1	T, C, P	Continuing work with CBT methods regarding the youth's primary problem related to school absence (e.g., exposure, behavioral activation and/or cognitive restructuring) by including the MMM Modules. Continuing work with the gradual exposure plan for returning to school. Working with boundaries.
S-6	1	T, P	Parent only session 2. Working with parent behavior. Identifying and reducing factors at home that maintain school absence.
S-7	1	T, C, P	Continuing to work toward returning to school. Revising gradual exposure plan. Focusing on how parents can support the youth in exposure exercises, and returning to school. Problem solving
S-8	1	T, C, P	Open session tailored to needs of the youth and parents. Continue working with CBT methods by including the MMM Modules. Open session tailored to needs of the youth and parents. Continue working with CBT methods by including the MMM Modules.
S-9	1	T, C, P	
S-10	1	T, C, P	Concluding the program. Focusing on maintaining and continuing the progress.
Booster	1	T, C, P	Focusing on maintaining and continuing the progress. Problem solving regarding relevant problems. Advise possible further help.
SM-1	1	T, P, S	Presenting and discussing the case formulation with the school. Planning the schools role in the youth's return to school. Informing the school about the B2S and CBT approach.
SM-2	1	T, S	Following up on the youth's progress in the school setting. Discussing potential academic difficulties, problems regarding bullying or other problems.
SM-3	1	T, S	Planning how the school can continue to help and support the youth. Discussing relapse prevention.
SM-4	1	T, S	Planning how the school can continue to help and support the youth. Discussing relapse prevention.

S, session; SM, school meeting; C, child; P, parent; T, therapist; S, school officials. The table is published in Thastum et al. (2019).

inclusion in the study using the following categories: less than 10% (less than 6 schooldays), 10–20% (6–12 schooldays, which are about 1 day of absenteeism each week or biweekly), 20–30% (12–18 schooldays, which are about more than 1 day of absenteeism each week), 30–50% (18–30 schooldays, which are about 2–3 days of absenteeism each week), more than 50% (more than 30 schooldays which are 3 or more days of absenteeism each week), or 100% (the child has not attended school the last 3 months); (2) at the 3-month follow-up, parents retrospectively reported the youth's school attendance for the 2 weeks prior to their completion of the questionnaires mailed to them, which was calculated to an absenteeism percentage score; and (3) the same applied at the 12-month follow-up.

Secondary Outcomes

Emotional, behavioral, and social difficulties

Youth emotional, behavioral and social difficulties was measured using the extended version of the *Strength and Difficulties Questionnaire* (SDQ; Goodman, 2001). The first part of the SDQ contains 25 items rated on a 3-point scale ranging from

0 to 2. Items are summed up into five subscales for emotional symptoms, conduct problems, hyperactivity/inattention, peer relationships problems, and prosocial behavior. The second part of the SDQ is an impact scale evaluating the level of chronicity, distress, social impairment, and burden to others of the problems reported. The scale contains five items (three items in the teacher version) rated on a 3-point scale ranging from 0 to 2. The SDQ includes both a child, parent, and teacher version. The Danish version of the SDQ has shown acceptable internal consistency (Cronbach's $\alpha = 0.44\text{--}0.86$) (Nielsen et al., 2012).

Anxiety

Youth anxiety was measured using the *Spence Children's Anxiety Scale* (SCAS; Spence, 1998; Nauta et al., 2004). The scale contains 44 items (including six positive fillers in the child-version) rated on a 4-point scale ranging from 0 to 3. Items are summed up into six subscales for the specific anxiety diagnoses social phobia, panic disorder and agoraphobia, generalized anxiety disorder, obsessive-compulsive disorder, separation anxiety disorder, and fear of physical injury. The SCAS includes both a child (SCAS) and parent version (SCAS-P). The Danish versions of the SCAS

and SCAS-P have demonstrated satisfactory test-retest reliability (SACS: $r = 0.61\text{--}0.84$, SACS-P: $r = 0.53\text{--}0.88$), and acceptable internal consistency (SCAS: Cronbach's $\alpha = 0.59\text{--}0.92$, SCAS-P: Cronbach's $\alpha = 0.50\text{--}0.90$ (Arendt et al., 2014).

Depression

Youth symptoms and levels of depression was measured using the *Mood and Feelings Questionnaire* (MFQ; Daviss et al., 2006). The MFQ includes both a child (33 items) and parent version (34 items), rated on a 3-point scale ranging from 0–2. Items are summed up into a total score. The Danish version of the MFQ has demonstrated high internal consistency (Cronbach's $\alpha = 0.92\text{--}0.93$) (Eg et al., 2018).

Self-efficacy

Youth self-efficacy was measured using the *Self-Efficacy Questionnaire for School Situations* (SEQ-SS; Heyne et al., 1998). The SEQ-SS contains 12 items about different situations associated with school attendance, each rated on a 5-point scale ranging from 1 to 5. The items are summed according to two subscales, Academic/Social Stress and Separation/Discipline Stress. A total score is calculated by summing all items (scores range from 12 to 60). Higher scores indicate a higher level of self-efficacy. The English version of the SEQ-SS has demonstrated high internal consistency (Cronbach's $\alpha = 0.81\text{--}0.85$) and good test-retest reliability ($r = 0.79\text{--}0.91$) (Heyne et al., 1998).

Parental self-efficacy was measured using the *Self-Efficacy Questionnaire for Responding to School Attendance Problems* (SEQ-RSAP; Heyne et al., 2016). The SEQ-RSAP contains 13 items concerning the parents' level of self-efficacy in relation to helping their child attend school regularly and without difficulty. The items are rated on a 4-point scale ranging from 1 to 4. The items are summed to yield a total self-efficacy score (scores range from 13 to 52). Higher levels of reported self-efficacy are represented by a higher score. A preliminary unpublished study of a longer version demonstrated high internal consistency (Cronbach's $\alpha = 0.91$) and good test-retest reliability ($r = 0.67$) (Lavooi, 2010).

Additional Outcomes

The following measures were included as secondary outcomes in the RCT. Here they were included with the purpose of testing the feasibility of the length of all questionnaires in total:

Family functioning

Youths and parents reported on family functioning using the General Functioning subscale from *The McMaster Family Assessment Device* (FAD; Epstein et al., 1983).

Experience of being bullied

The *Personal Experience Checklist* (PECK; Hunt et al., 2012) is a questionnaire developed by Hunt et al. to provide a multidimensional assessment of a young person's personal experience of being bullied.

Parent-school collaboration

Three items were developed to parents and teachers by the researchers to assess the quality of the collaboration between the

parents and the school rated on a 4-point scale (from “not at all” to “very good”).

Pediatric quality of life

Youths reported their health-related quality of life using the *Child Health Utility 9D* index (CHU-9D; Stevens, 2012). The CHU-9D was developed for use in cost-utility analysis and therefore quality adjusted life years can be calculated (Canaway and Frew, 2013).

Data Analysis

Descriptive statistics, including means, SD, and frequencies, were used to describe the sample characteristics, participant dropout rates, session attendance, intervention duration, and proportion of completed questionnaires.

Qualitative data based on the participants' responses to the open-ended questions about the acceptability of the B2S program was collected and analyzed using a qualitative description design (Neergaard et al., 2009). The qualitative data were analyzed using content analysis with modifiable coding systems that corresponded to the data collected. The data was sorted to identify similar patterns and themes. Commonalities and differences among the data were also assessed. The codes were then grouped into six themes representing the general feedback from the participants about the intervention. The analyses were done by the first author and the coding were performed in NVivo (NVivo qualitative data analysis software; QSR International Pty Ltd. Version 12, 2018).

The preliminary evaluation of outcome included an evaluation of change over time on the outcome measures using Mixed Linear Models (MLMs). MLMs tolerate missing values and do not unnecessarily compromise statistical power. All MLMs were estimated with the *maximum likelihood method* (ML) and were based on the intent-to treat sample ($n = 24$). However, due to the small sample size, the *restricted estimate maximum likelihood method* (REML) is predicted to be the best fit, and was therefore used for the final model (Raudenbush and Bryk, 2002). The data were hierarchically arranged in two levels, with time at *Level 1* nested within individuals at *Level 2*. All models included a random intercept, and the slope was specified as random if improving the model fit evaluated by a significant change in the $-2LL$ fit statistics (Heck et al., 2013). Based on visual inspection of the data and an inspection of the model indices for the time variable on all outcome, the best fit for the time variable was evaluated for each model using $-2LL$ fit statistics (Heck et al., 2013). Covariance type was tested with Variance Components (VC), First-Order Autoregressive Structure [AR(1)], and Heterogeneous First-Order Autoregressive [ARH(1)], using the $-2LL$ fit statistics (Heck et al., 2013). The AR(1) or ARH(1) structure was used if it improved the model fit using $-2LL$ fit statistics (Heck et al., 2013).

Intervention effects were indicated by a significant change in means over time, indicated by a significant two-way interaction between participant's scores and time. Effect sizes were expressed by Cohen's d^1 , with 0.2, 0.5, and 0.8 considered as small, medium,

¹Effect-size equation (Cohen's d): $d = 2 \times \sqrt{(F/df)}$

TABLE 2 | Overview of the initial testing of the variables in the mixed linear models.

Outcome	Respondent	Method	Time	Covariance Type	Para.	Model
School Absenteeism (%)	Municipality	REML	TimeLog	VC	4	Random intercept and fixed slope
SCAS Total	Youth	REML	TimeLog	ARH(1)	6	Random intercept and random slope
	Parent	REML	Time	VC	4	Random intercept and fixed slope
SDQ – Emotional symptoms	Youth	REML	TimeLog	VC	4	Random intercept and fixed slope
	Parent	REML	TimeLog	VC	4	Random intercept and fixed slope
	Teacher	REML	TimeExp	VC	4	Random intercept and fixed slope
SDQ- Conduct problems	Youth	REML	Time	VC	4	Random intercept and fixed slope
	Parent	REML	TimeLog	VC	4	Random intercept and fixed slope
	Teacher	REML	TimeExp	VC	4	Random intercept and fixed slope
SDQ- Hyperactivity/inattention	Youth	REML	TimeLog	VC	4	Random intercept and fixed slope
	Parent	REML	Time2	VC	4	Random intercept and fixed slope
	Teacher	REML	TimeExp	VC	4	Random intercept and fixed slope
SDQ- Prosocial behavior	Youth	REML	TimeWeeks	VC	4	Random intercept and fixed slope
	Parent	REML	TimeLog	VC	4	Random intercept and fixed slope
	Teacher	REML	TimeWeeks	VC	4	Random intercept and fixed slope
SDQ- Problems with peers	Youth	REML	Time	VC	4	Random intercept and fixed slope
	Parent	REML	TimeLog	ARH(1)	6	Random intercept and random slope
	Teacher	REML	TimeExp	VC	4	Random intercept and fixed slope
SDQ Impact	Youth	REML	Time	VC	4	Random intercept and fixed slope
	Parent	REML	TimeLog	VC	5	Random intercept and random slope
	Teacher	REML	Time	VC	4	Random intercept and fixed slope
MFQ	Youth	REML	Time	VC	4	Random intercept and fixed slope
	Parent	REML	TimeLog	VC	5	Random intercept and random slope
SEQ-SS - Total	Youth	REML	Time2	ARH(1)	6	Random intercept and random slope
SEQ-SS -Academic	Youth	REML	Time	VC	4	Random intercept and fixed slope
SEQ-SS -Separation	Youth	REML	Time2	ARH(1)	6	Random intercept and random slope
SEQ-RSAP - Total	Parent	REML	TimeLog	ARH(1)	6	Random intercept and random slope

REML, restricted Estimate Maximum Likelihood Method; TimeLog, log linear model of time; TimeExp, exponential model of time; TimeWeeks, modeling of time in weeks; Time2, quadratic model of time; ARH(1), first-Order autoregressive; VC, Variance Components.

and large effects respectively (Cohen, 1988). See **Table 2**, for an overview of the initial testing of the variables in the MLMs.

All statistical analyses were performed with IBM SPSS Statistics 25.00 for Windows (IBM Corp. Released 2016. IBM SPSS Statistics for Windows, Version 25.0. Armonk, NY, United States: IBM Corp).

RESULTS

Recruitment Capability and Sample Characteristics

The sample consisted of 24 youths and their parents. Initial, the recruitment time were expected to take 1–2 months based on the eligible number of children in the municipality with more than ten percent absenteeism. However, it took 3 months to include the 24 youths.

As presented in **Table 3**, 24 youths aged 12.7 years (range 8–16 years) participated in the study. There was an equal number of girls and boys, and one fourth of the youths were totally absent from school across the last 4 weeks before study inclusion. For the majority of the youths the school had indicated to the parents that they were worried about the youths' mental wellbeing. All youths had received treatment before study inclusion due to

their absenteeism problems. Eight youths (33%) had one or more psychiatric diagnoses prior to inclusion, and they all had an anxiety disorder as one of their diagnoses. For the parents, 21% reported mental health problems themselves. In the semi-structured psychopathology interview, only one youth did not report any psychiatric symptoms. Symptoms related to anxiety and/or depression were most often reported (75% reported anxiety symptoms, 46% reported depressive symptoms).

Feasibility of Data Gathering Procedures

As presented in **Figure 1**, in all cases, a parent completed the questionnaires at baseline and post-intervention, and in nearly all cases, a parent completed the questionnaires at 3-month follow-up (95%). However, the response rate declined at the 12-month follow-up, where almost two-thirds (64%) of the parents completed the questionnaires. The teachers' completion rates were relatively high at baseline (83%) and post-intervention (86%). There was a decline in completion rates at 3-month follow-up (59%). When asked, teachers reported that they did not complete the questionnaires because they lacked sufficient knowledge regarding the youths in question because of their absenteeism from school. The response rates for the youths were high at baseline (92%), low at post-intervention (55%) and

TABLE 3 | Sociodemographic characteristics of sample.

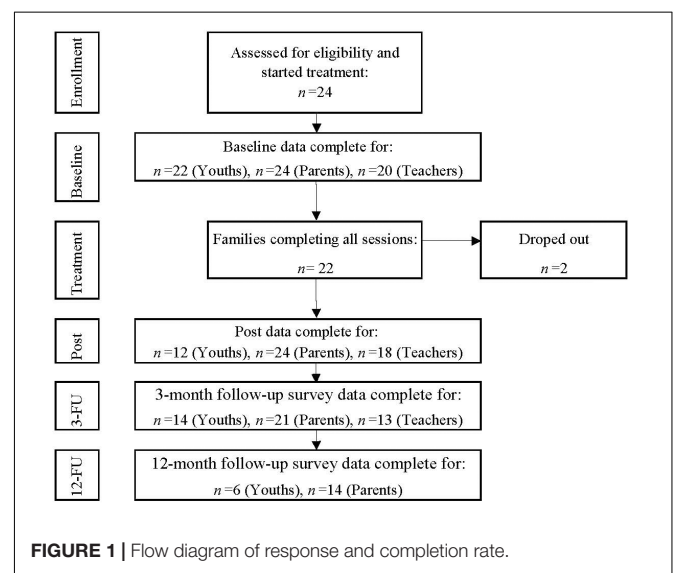
Characteristic	Participants
Age at inclusion, years, mean (SD)	12.7 (2.4)
Gender, males, <i>n</i> (%)	12 (50%)
Gender by age group, <i>n</i> (%)	
Males, aged 6–10 years	3 (25%)
Males, aged 11–16 years	6 (75%)
Females, aged 6–10 years	1 (8%)
Females, aged 11–16 years	11 (92%)
School absenteeism four weeks prior to inclusion, <i>n</i> (%)	
≤10% absenteeism	0 (0%)
11–30% absenteeism	4 (17%)
31–50% absenteeism	5 (21%)
51–70% absenteeism	5 (21%)
71–99% absenteeism	4 (17%)
100% absenteeism	6 (25%)
Academically behind peers (teacher-report), <i>n</i> (%)	8 (33%)
Educational support ¹ , <i>n</i> (%)	5 (21%)
School/teacher worried about the youth's mental wellbeing, <i>n</i> (%)	19 (79%)
Changed school at least once before inclusion, <i>n</i> (%)	8 (33%)
Changed school after inclusion, <i>n</i> (%)	10 (42%)
Former treatment due to absenteeism problems, <i>n</i> (%):	
School psychologist	16 (67%)
Private psychologist	13 (54%)
General practitioner	19 (79%)
Pediatric physician	4 (17%)
Child psychiatrics	16 (67%)
Other forms of help ²	5 (21%)
No former treatment	0 (0%)
Current medication, <i>n</i> (%)	1 (4%)
Diagnosis prior to inclusion, <i>n</i> (%):	
Psychiatric diagnosis ³	8 (33%)
Somatic diagnosis ⁴	5 (21%)
Living with two parents, <i>n</i> (%)	11 (46%)
Maternal education (Intermediate or long), <i>n</i> (%)	16 (67%)
Paternal education (Intermediate or long), <i>n</i> (%)	8 (33%)
Ethnicity, <i>n</i> (%)	
Both parents born in DK	19 (79%)
One foreign born	5 (21%)
Two foreign born	0 (0%)
Maternal self-reported mental health problems, <i>n</i> (%) ⁵	5 (21%)
Paternal self-reported mental health problems, <i>n</i> (%) ⁶	4 (17%)
Symptoms reported in psychopathology interview, <i>n</i> (%)	
Anxiety symptoms	18 (75%)
Panic disorder	4 (17%)
Separation anxiety	6 (25%)
Social phobia	8 (33%)
Specific phobia	7 (29%)
Agoraphobia	7 (29%)
Generalized anxiety	5 (21%)
Obsessive Compulsive Disorder (OCD)	3 (13%)
Depressive symptoms	11 (46%)
Depressive symptoms – depressed mood/irritability	8 (33%)
Depressive symptoms – diminished interest or pleasure	10 (42%)
Depressive symptoms – fatigue or loss of energy	8 (33%)
Post-Traumatic Stress Disorder (PTSD)	2 (8%)

(Continued)

TABLE 3 | Continued

Characteristic	Participants
ADHD	4 (17%)
Oppositional defiant disorder	5 (21%)
Conduct disorder	1 (4%)
Pervasive or specific developmental disorders	6 (25%)
No symptoms reported	1(8%)
SRAS-R:	
Function 1: Avoidance of stimuli provoking negative affectivity, <i>n</i> (%)	17 (71%)
Function 2: Escape from aversive social and/or evaluative situations, <i>n</i> (%)	1 (4%)
Function 3: Pursuit of attention from others, <i>n</i> (%)	5 (21%)
Function 4: Pursuit of tangible reinforcement outside school, <i>n</i> (%)	0 (0%)
Function 1 and function 2 combined, <i>n</i> (%) ⁷	1 (4%)

¹Number of youths receiving any educational support in the school (support teacher). ²Help from the social services in the municipality (*n* = 3), psychotherapist (*n* = 1), occupational therapist (*n* = 1). ³Anxiety (*n* = 8), autism (*n* = 4), learning difficulties (*n* = 2), depression (*n* = 1), OCD (*n* = 1), ADHD (*n* = 1), eating disorder (*n* = 1). ⁴Asthma or allergy (*n* = 4), constipation (*n* = 1). ⁵Anxiety (*n* = 5), depression (*n* = 4), ADHD (*n* = 2), autism (*n* = 1), learning difficulties (*n* = 1). ⁶Depression (*n* = 3), anxiety (*n* = 1), alcohol abuse (*n* = 1). ⁷Functional scores within 0.25 points of one another are considered equivalent.

**FIGURE 1 |** Flow diagram of response and completion rate.

3-month follow-up (64%), and very low at 12-month follow-up (27%).

The registry data was used in the analyses, as absenteeism was measured daily and not retrospectively and therefore viewed as the most accurate measure of school absenteeism. However, we replaced the registry data in the analyses with the parent-reported school absenteeism data in the following instances: (1) For seven of the participants (27%) their school absenteeism at baseline was reported as zero percentage in the registers, indicating that the schools did not register the absenteeism of the students. For these seven participants the parent-reported school absenteeism, at screening, were used instead of the registry data at baseline. (2) One participant (4%) was enrolled in a private school, therefore

no registry data was available for this case, and the parent-reported school absenteeism was used instead. (3) After the summer break following the intervention, five youths (21%) changed to schools outside the municipality making registry data unavailable, thus parent-reported school absenteeism was used in these cases. (4) To investigate the robustness of the registry data, differences between the registry- and parent-reported data were compared for the three occasions where parent-reported data and registry data on school attendance were available (baseline, 3-month follow-up, and 12-month follow-up). A difference in the level of attendance was found at the 3-month follow-up for two cases (8%), where school absenteeism was significantly lower in the registry data compared to the parent-reported data (case 1: registry data = 10% and parent-reported data = 100%, case 2: registry data = 0% and parent-reported data = 70%). In these cases parent-report was used in the analyses.

Resources to Implement the Intervention and Study Procedures

Based on evaluation with the psychologist two difficulties with the resources to manage the intervention was stated: Firstly, the psychologists spent more time on the cases than initially planned where we estimated an average of 30 psychology hours pr. case. This equals what the municipality estimates that psychologists spend on youth with SAP in their treatment as usual. In average however, the psychologists spent in average 40 h on each case. This included participation in sessions and school meetings, as well as preparation for the sessions and if necessary communication with the families between the sessions. Secondly, the psychologists reported feeling less competent in cases where youths' primary problems were related to behavioral problems.

Based on evaluation of the resources to manage the study procedures with the staff and research team at CEBU there were enough resources to manage the technical part of the questionnaire collection. Office spaces, and administrative capacity were also evaluated as being sufficient.

Acceptability of the Intervention

Of the 24 families who agreed to participate, 22 families (92%) completed the intervention. The two families (8%) who did not complete the intervention ended the intervention after session two and session six, respectively. The parents who withdrew after six sessions reported that their child found it too stressful to attend the sessions and that the setting with both parents, a psychologist, and a co-therapist attending the sessions made the child feel uncomfortable. The other family withdrew after two sessions because of lack of motivation to work with the child's SAP as they were waiting for the child to attend a different school several months later.

With regards to participation, 19 of the 22 remaining families (86%) completed all 10 sessions, one family completed nine sessions, and two families completed eight sessions. The booster session was conducted with 19 families (86%). Thirteen (59%) of the cases included four school meetings as planned. One case did not include any school meetings. On average, the first school

meeting was conducted 26 days after the first session (range 6–46 days). The mean duration of the B2S intervention (from the first session to the 10th session) was 80 days, with a range of 55–139 days. The intervention course was prolonged for three families, due to the summer holiday. On average, there were 76 days from the last session to the booster session with a range of 35–136 days. Again, due to the summer holiday the time between the last session and the booster was prolonged for most of the families. The whole B2S program, from assessment interview to booster session, spanned on average 182 days (range from 154 to 210 days).

Intervention Satisfaction

In general, both youth and parents were satisfied with B2S. As shown in **Table 4**, the majority of the youths and all parents answered 'true' or 'partly true' to the statement 'If a friend needed similar help, I would recommend B2S,' and all answered 'true' or 'partly true' to the statement 'I trusted the therapist.' All parents answered 'true' or 'partly true' to the statement 'I have been given enough information about the purpose and course of B2S prior to the start,' and all youths answered 'true' or 'partly true' to the statement 'The therapist had an understanding of my worries and issues.'

Satisfaction as reported by the teachers was lower with regards to the statements 'I trusted the therapist' and 'I have been given enough information about the purpose and course of B2S prior to the start.' The majority of the teachers (83%) found the meetings at the school useful by reporting "partly true" or "true" to this statement.

At 12-month follow-up, all youths and 85% of the parents who completed the 12-month follow-up replied "partly true" or "true" that they would still recommend B2S to a friend. Sixty-seven percent of the youth reported that they used the strategies from B2S, and 77% of the parents found the strategies helpful and a part of their everyday life. The B2S strategies which the parents still found helpful at 12-month follow-up were related to the specific cognitive behavioral techniques (e.g., graduated exposure, problem solving, rewarding, and cognitive restructuring).

Qualitative Feedback About the B2S Program

The participants' responses to the open-ended questions about B2S were grouped within the six themes below. All participants completing the post-questionnaires (12 youths, 24 parents, and 18 teachers) responded to the open-ended questions and provided qualitative feedback.

Theme 1: assessment

Two parents and one teacher commented on the need for a better initial screening and assessment of the youth before the start of the program. One parent commented: *"It will be better for the children to be diagnosed before, to give a complete evaluation of what will be the most efficient help for the child."* Another parent commented: *"I had hoped to find the answer to why my son was/is sad. He has indicated that there is 'something' that he found difficult to talk about that makes him sad. But we have never worked out what that is."* Only one commented on the length of the

TABLE 4 | Intervention Satisfaction at post-intervention.

Item	Respondent	Response categories		
		Not True	Partly True	Certainly True
If a friend needed similar help, I would recommend Back2School	Youth	3 (25%)	3 (25%)	6 (50%)
	Parent	0 (0%)	6 (25%)	18 (75%)
	Teacher	2 (11%)	6 (33%)	10 (56%)
I trusted the therapist	Youth	0 (0%)	2 (17%)	10 (83%)
	Parent	0 (0%)	2 (8%)	22 (92%)
	Teacher	1 (6%)	7 (39%)	10 (56%)
I have been given enough information about the purpose and course of Back2School prior to the start	Parent	0 (0%)	3 (12%)	21 (88%)
	Teacher	2 (11%)	8 (44%)	8 (44%)
The therapist had an understanding of my worries and issues	Youth	0 (0%)	5 (42%)	7 (58%)
The meetings at the school was useful	Teacher	3 (17%)	9 (50%)	6 (33%)

Data presented as n (%).

questionnaires, where a parent reported that the questions were too difficult for an 8-year old.

Theme 2: the structure of the B2S program

Several parents commented on the structured and systematic approach of the B2S program, as a positive part of the program. The focus on both the youths' strengths and difficulties was highlighted as well: *"It was very useful that both the child's strengths and difficulties were identified."* Parents viewed the inclusion of both the youths and their parents as a positive feature of the program. When asked about what worked well in the program, parents replied: *"That my daughter and I got a common language and techniques to work with her anxiety issues"* and *"That we were together in the program, the holistic perspective on the need of all family members to be aware of their behavior and thoughts."* Others were positive about the inclusion of sessions with the parents only. One negative comment was reported regarding the inclusion of the parents in the intervention, where the parent stated that the presence of two therapists and parents could be too much for the youth compared to individual therapy only with the youth. Another parent mentioned that the therapist should be aware of adjusting the communication to a level understandable for the child and not just the parents. Two parents found it difficult to attend the sessions at the Center as their child found it difficult to get out of the house and therefore the child did not participate in the sessions.

Theme 3: the therapeutic techniques

Several participants commented on the usefulness of the graduated exposure. One youth commented: *"I have realized that to overcome my anxiety I have to face what triggers my anxiety."* The rewards combined with the graduated exposure was also valued: *"It was really good and fun with the different types of rewards (stickers, praise) and the rewards that were given when doing graduated exposure."* One youth recommended that the program in the future used more *in vivo* exposure. Several parents found the parent management techniques very helpful, including the implementation of new routines at home, techniques to manage conflict, and the support from the therapist making the parent's more comfortable in making demands to their child.

Theme 4: collaboration with schools

Parents and teachers highlighted the importance of including the school in the intervention: *"The school makes an effort when there are meetings and especially follow-up meetings"* and *"As a school we got a better understanding of what anxiety is and how to plan a longer course for the child. As a teacher it can be difficult to know how to handle the situation or the student."* The involvement of school management was also regarded as important: *"It is important that the school management is involved and is attending the meetings."* Parents and teachers also commented on the timing of the school meetings, and suggested that the school meetings should be introduced earlier in the program: *"The school and B2S did not communicate in the beginning, which caused confusion because of contradictory guidance"* and *"It seems to be very useful to cooperate on helping the youth (family, school, B2S). However, we (the school) were involved too late in the program."* Some of the teachers recommend that the therapist should gather more information about the student's class and the social environment in the class: *"It is important that B2S focuses on what the child is a part of in the school. I would have liked it if the therapists came and observed the class and talked to the teacher, and thus got more information about what reality the child is coming back to."* Some teachers also reported that there was a need for more information and clearer communication during the program: *"I needed more focus on how I, as a teacher, can handle different situations, to make sure that I am not working against what's taught in B2S"* and *"Better communication, so everybody know what is expected from them."*

Theme 5: timing, intensity, and duration of the program

Another theme from the participants' feedback was the timing of the sessions. It was recommended by some of the parents to conduct the sessions before or after school hours. There was some disagreement in the comments regarding the intensity of the program. Some parents found the frequency of the sessions too intense and wanted more time between the sessions, while other highlighted the pace in the program as positive. Several parents commented on the duration of the B2S program, and suggested adding more sessions and an extra booster session after 1 year.

Theme 6: satisfaction with the therapists

All comments regarding the therapists from youth, parents, and teachers were positive, and reflected great satisfaction with the therapists: “The therapists were very competent. It felt like they almost knew our son, even though they had only just met him. They were well-prepared,” “Very competent therapists, who knew how to make a good contact with our daughter without pressure. They were able to adhere to the manual without being too rigid,” and “The therapist gave me hope and motivation to do the things in the future, I want to.”

Preliminary Outcome of the Intervention

The level of school absenteeism was reduced on average from 67% at baseline to 26% at post-intervention and 20% at 12-month follow-up (see **Figure 2**). The change was significant ($p = 0.001$) with a large effect size ($d = 1.357$).

As shown in **Figure 3**, at 12-month follow-up 16 (67%) of the participants were absent from school less than 10% of the time and therefore did not meet the inclusion criteria with an absenteeism level of minimum 10% anymore. Four (17%) participants still attended school less than 50% of the time and one of the participant (4%) did not attend school at all at 12-month follow-up. At 3-month follow-up seven (29%) participant had more than 50% absenteeism and three (13%) were total absent from school.

As presented in **Table 5**, there was a significant average effect over time on several outcomes. All informants reported an average significant improvement on the SDQ emotional problem scale and the SDQ impact scale, all with large effect sizes. A significant and large effect on SDQ conduct problems was also found for parent- and youth report. No significant improvement was found on the SDQ hyperactivity scale, and a significant improvement was found only in youth-report on the SDQ peer problem scale, and prosocial behavior. For anxiety symptoms and depression symptoms, youth and parents reported on average a significant improvement with moderate to large effect sizes. On average, significant and large improvement in self-efficacy was also found for both youth and parent.

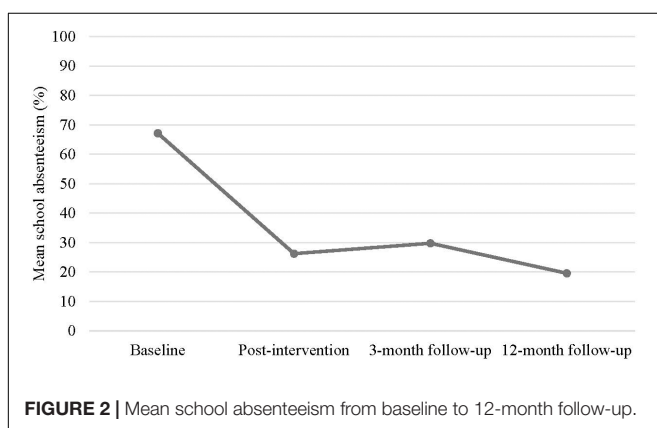


FIGURE 2 | Mean school absenteeism from baseline to 12-month follow-up.

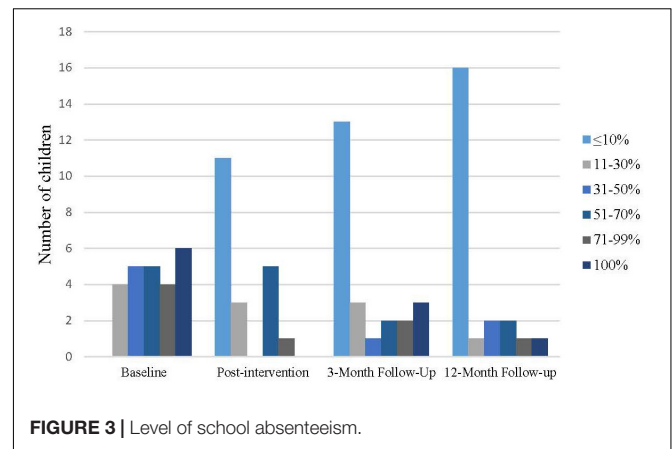


FIGURE 3 | Level of school absenteeism.

DISCUSSION

This study of the acceptability of the B2S intervention and the feasibility of evaluating it an RCT study informs a range of modifications to be made. Following, we discuss modifications to recruitment, data gathering, and resourcing. Thereafter, we discuss the acceptability and preliminary effectiveness of B2S.

Recruitment and Sample Characteristics

Twenty-four youth and their parents were recruited, although it took more time to recruit the targeted number of families than was anticipated. This could be due to the fact that it was difficult to disseminate information about the intervention to parents in the municipality. Not all schools used their information channels to inform parents about the intervention. It was also difficult to get information about the B2S program to relevant professionals (e.g., social workers, psychologists). Because families self-refer to the B2S program, it is important that information about the intervention reaches families in need. Thus, for the RCT, the municipality will make it mandatory for all schools to inform parents about B2S. Before starting the RCT, more effort would be made to get information to relevant professionals, including sending information about B2S to teachers at all schools within the municipality.

The inclusion criterion of 10 percent absenteeism during the last 3 months might be regarded by some as a low threshold for inclusion. However, by using this lower threshold, the results would seem to be relevant to the broader population of youth with SAPs and not only to the smaller group of youth with severe SAPs (e.g., complete absenteeism for the last 6 months). Despite our low threshold for inclusion, most youth who were included in the feasibility study had high levels of school absenteeism, and high scores on measures of anxiety and depression. Only one youth reported no symptoms during the psychopathology interview. In short, while the inclusion criteria permitted referral of youth with mild SAPs, the families of youth with more severe problems sought help via the B2S program.

TABLE 5 | Outcomes and estimates of intervention effects.

Outcome	Respondent	Baseline	Post-intervention	3-Month Follow-Up	12-Month Follow-Up	Time $\times$ Intervention effect
SDQ – Emotional symptoms	Youth	6.18 (2.34) [22]	4.33 (2.50) [12]	3.14 (2.25) [14]	2.83 (2.71) [6]	$F = 37.303, p < 0.001, d = 2.040$
	Parent	7.46 (2.02) [24]	5.29 (2.71) [24]	4.71 (2.57) [21]	3.71 (2.09) [14]	$F = 45.01, p < 0.001, d = 1.744$
	Teacher	6.20 (2.38) [20]	5.78 (2.24) [18]	4.77 (2.65) [13]		$F = 4.449, p = 0.042, d = 0.709$
SDQ- Conduct problems	Youth	1.82 (1.56) [22]	1.33 (0.98) [12]	0.86 (1.10) [14]	0.50 (0.84) [6]	$F = 5.326, p = 0.028, d = 0.861$
	Parent	2.04 (1.63) [24]	1.62 (1.38) [24]	1.24 (1.22) [21]	0.86 (0.95) [14]	$F = 10.752, p = 0.002, d = 0.847$
	Teacher	0.95 (0.89) [20]	1.62 (1.38) [24]	0.54 (0.78) [13]		$F = 2.083, p = 0.157, d = 0.455$
SDQ- Hyperactivity/inattention	Youth	4.68 (2.34) [22]	3.33 (2.06) [12]	3.29 (1.54) [14]	3.33 (2.94) [6]	$F = 3.708, p = 0.063, d = 0.661$
	Parent	3.62 (2.55) [24]	3.92 (2.92) [24]	3.57 (2.38) [21]	3.57 (2.44) [14]	$F = 0.079, p = 0.780, d = 0.072$
	Teacher	3.40 (2.28) [20]	3.92 (2.92) [24]	2.85 (2.48) [13]		$F = 0.474, p = 0.495, d = 0.225$
SDQ- Prosocial behavior	Youth	7.32 (2.01) [22]	7.92 (2.07) [12]	7.93 (1.90) [14]	8.67 (1.21) [6]	$F = 4.490, p = 0.041, d = 0.724$
	Parent	7.17 (2.06) [24]	7.42 (2.17) [24]	7.52 (2.11) [21]	7.57 (2.38) [14]	$F = 2.25, p = 0.780, d = 0.072$
	Teacher	6.40 (2.56) [20]	7.42 (2.17) [24]	7.77 (2.05) [13]		$F = 4.144, p = 0.050, d = 0.696$
SDQ- Problems with peers	Youth	3.55 (2.09) [22]	2.92 (1.93) [12]	2.21 (1.93) [14]	1.50 (1.76) [6]	$F = 8.484, p = 0.006, d = 0.958$
	Parent	2.63 (1.81) [24]	2.38 (1.64) [24]	2.00 (1.84) [21]	2.43 (2.28) [14]	$F = 1.520, p = 0.229, d = 0.501$
	Teacher	2.40 (2.11) [20]	2.38 (1.64) [24]	1.69 (1.60) [13]		$F = 0.583, p = 0.451, d = 0.266$
SDQ Impact	Youth	2.77 (2.71) [22]	1.75 (2.16) [12]	1.14 (2.21) [14]	1.17 (1.47) [6]	$F = 6.974, p = 0.013, d = 0.918$
	Parent	5.63 (2.16) [24]	3.63 (2.99) [24]	3.14 (2.80) [21]	2.93 (3.08) [14]	$F = 15.701, p < 0.001, d = 1.488$
	Teacher	3.95 (1.57) [20]	2.44 (2.73) [18]	1.08 (1.55) [13]		$F = 31.427, p < 0.001, d = 1.915$
SCAS Total	Youth	39.43 (16.77) [21]	32.50 (20.34) [12]	28.64 (17.18) [14]	24.84 (13.18) [6]	$F = 5.101, p = 0.042, d = 1.256$
	Parent	42.00 (16.18) [24]	34.95 (16.44) [22]	33.00 (16.88) [21]	28.21 (15.64) [14]	$F = 22.385, p < 0.001, d = 3.229$
MFQ	Youth	23.80 (12.13) [20]	17.33 (14.24) [12]	15.57 (13.19) [14]	11.33 (14.08) [6]	$F = 4.954, p = 0.033, d = 0.763$
	Parent	25.96 (10.00) [24]	18.91 (12.89) [22]	18.43 (13.79) [21]	16.46 (15.01) [13]	$F = 6.531, p = 0.017, d = 1.002$
SEQ-SS – Total	Youth	37.35 (12.14) [20]	41.83 (13.67) [12]	45.64 (11.75) [14]	51.17 (4.36) [6]	$F = 4.824, p = 0.046, d = 1.206$
SEQ-SS – Academic	Youth	18.25 (6.21) [20]	20.92 (6.64) [12]	22.36 (6.28) [14]	25.17 (2.64) [6]	$F = 13.282, p = 0.001, d = 1.291$
SEQ-SS – Separation	Youth	19.10 (6.66) [20]	20.92 (7.53) [12]	23.29 (6.09) [14]	26.00 (2.76) [6]	$F = 4.649, p = 0.050, d = 1.171$
SEQ-RSAP – Total	Parent	38.17 (4.19) [24]	41.96 (4.61) [22]	43.33 (6.37) [21]	44.23 (6.44) [13]	$F = 11.489, p = 0.003, d = 1.489$

Data presented as mean (SD) [n].

Data Gathering Procedures and Outcome Measures

The percentage of parents who responded to the questionnaires at baseline, post-intervention and 3-months follow-up was acceptable, except at the 12-month follow-up. In cases where either parents or youth did not complete the questionnaires within 2 weeks, a reminder email was sent on two occasions. Nevertheless, the response rate among youths was low, both after the intervention and at follow-up. None of the youth and just one parent commented on the length of the questionnaires (that it was too long), suggesting that the low response rate among youth was not due to the extensive number of items in the questionnaires. Some of the youths refused to complete the questionnaires or the parents exempted their child from completing the questionnaires, believing that it was too challenging for them. Thus, in the RCT, the importance of completing the questionnaires would be highlighted for the psychologists, co-therapists, as well as the parents and youth. It would be mandatory for the youth and parents to complete the baseline measures to be included in the RCT. In the RCT, in addition to the email reminders, participants not completing the questionnaires would receive a telephone reminder. Because we expect a lower response rate in the control group, participants in the control group would receive a shorter version of the post-intervention assessment battery, and families would be offered a gift card (value 200 DKK/26 EUR)

after the completion of post-intervention assessment and again after follow-up.

At 3-month follow-up the response rate among the teachers was low, largely attributable to the fact that 10 youth changed school after the completion of the intervention. The 3-month follow-up questionnaires was collected shortly after the youth's change of school, and therefore the teachers at the new school thought that they did not know the students well enough to complete the questionnaires.

The absenteeism data from the school register was intended to be our primary outcome measure. However, a comparison of parent-reported absenteeism and absenteeism based on school register data suggests that the validity of the school-registered absenteeism was questionable for some youths. In the RCT, we would therefore include a detailed parent registration of the youths' daily attendance during the last 2-weeks before each data-collection points (pre-intervention, post-intervention, and follow-up), to be able to check this registration against the school's registration.

Resources and Ability to Implement the Study and Intervention

There were two main difficulties with respect to resourcing and ability to deliver the intervention. First, the psychologists spent more time than initially planned on the preparation of sessions,

but we expect that the time used per case would be lower in the RCT because the psychologists would be more familiar with study procedures and the intervention itself. However, as a precaution against potential overburdening of the psychologists, two additional psychologists from the municipality would be trained for participation in the RCT. Furthermore, in the RCT, measures of implementation cost and health related benefits will be collected for both the B2S group and treatment as usual group to conduct cost-benefit and cost-utility analyses of the B2S program.

Second, the psychologists were school psychologist with counseling as their main task before participating in B2S. The psychologists received a 6-day training course and weekly face-to-face group case supervision. Based on the preliminary results the competences of the psychologists to use B2S seems sufficient. However, because the psychologists reported feeling less competent in cases where youths' primary problems were related to behavioral problems, a supervisor with expert knowledge about externalizing problems and parent management techniques would be included as a supervisor in the RCT. Other matters related to resourcing were not found to be problematic (e.g., setting up the digital questionnaires and monitoring the questionnaires collections, office space, and administrative capacity).

Acceptability of the Study Procedures and Intervention

The dropout rate of 8 percent is comparable to or lower than other studies examining the effect of therapy for school refusal (Heyne and Sauter, 2013). Moreover, 86 percent of the families participated in all intervention sessions. In general, parents and youth were satisfied with B2S, and satisfaction was maintained 1 year after the intervention. At the 1-year follow-up, the majority of families reported that they had implemented the strategies they acquired during the B2S sessions. The teachers' satisfaction ratings were lower than those of parents and youth, but the majority of the teachers found the meetings at the school useful.

Parent qualitative feedback indicated that some parents wished there had been a more comprehensive diagnostic screening of the youth before the start of the intervention. These were the families for whom symptoms of more complex mental health problems were identified among the youth during their participation in B2S. The B2S psychologists referred these families to psychiatric specialists for a diagnostic screening of the youth. Because the initial screening in B2S already comprised a comprehensive battery of questionnaires, together with the assessment interview, this procedure will not be changed in the RCT.

The family oriented approach was highlighted by the parents in the qualitative feedback as positive, and the parents found the parent management techniques very useful. In addition, the involvement of the school was mentioned as an important part of the B2S program by parents and teachers. Based on the qualitative feedback from teachers and parents, when B2S is implemented in the context of an RCT the school meetings would be scheduled earlier in the program, and a detailed agenda for

the meetings would be included in the B2S manual. Two of the parents would have preferred that the sessions were conducted in the home rather than at the clinic because the child did not want to leave the house. In these cases the intervention was focused on the parents' behavior, and the parents were taught strategies to work with the child at home. They would be guided in how to help their child attend therapy sessions at the Center, constituting graded exposure for the child with respect to leaving the house, as a step toward ultimately being able to attend school.

Preliminary Outcome of the Intervention

One of the inclusion criteria for participating in the study was absenteeism above 10 percent. Following the B2S program, the number of youths with levels of school absenteeism below 10 percent were increasing from 45 percent of the youth at post-intervention to 54 percent at 3-month follow-up and 66 percent 1 year after the intervention. The large reduction in school absenteeism was comparable to or better than two previous non-controlled studies with youth with SAPs (Heyne et al., 2011; Hannan et al., 2019). However, the youth in those studies were older and presented with more psychological symptoms, perhaps explaining the larger improvement in school attendance in our sample.

B2S includes modules targeting anxiety, depression, and behavioral problems. We observed significant and large reductions over time with respect to each of these areas of youth functioning. This highlights the relevance of these modules in the intervention as it seems that the intervention do address these problems in the youth. Due to the uncontrolled design, the improvement seen in the outcome measures cannot for sure be related to B2S. However, based on this study the inclusion of both the intervention elements as well as outcomes seems relevant for the upcoming RCT.

In addition, the youth and their parents reported a higher level of school-related self-efficacy after the intervention. Specifically, youth felt more able to cope with challenging school situations and parents were more confident about responding to their child's SAP. Because of the change in self-efficacy, and preliminary support for the role of increased self-efficacy in mediating outcomes following treatment for school refusal (Maric et al., 2013), the RCT would include self-efficacy as a mediator variable, measured at two time points during the intervention. This would provide greater insight into the impact of self-efficacy on school attendance and vice versa.

Limitations

There are a number of limitations to the current study. First, the design was uncontrolled and therefore the impact of B2S on the positive changes observed on the outcome measures is not clear. The positive changes may be related to other factors such as spontaneous remission or regression toward the mean. Second, because of the uncontrolled design of the study, the acceptability of randomization and its impact on attrition could not be evaluated. Third, the proportion of youth completing the

questionnaires was low. This was especially the case for the 12-months follow-up where only 27 percent of the youth completed the questionnaires. Third, the validity of absenteeism data from the school register was questionable for some of the youths as the schools had registered 27 percent of the youth as having no school absenteeism at baseline.

CONCLUSION

In conclusion, this study of the feasibility of the B2S program found high participation rates as well as high levels of satisfaction with the program which were maintained 1 year after the intervention. Teacher satisfaction was lower than that of youth and parents, but the majority found the school's participation in the intervention helpful. Preliminary evaluation of intervention outcomes showed a significant increase in school attendance and decrease in psychological symptoms, as well as a significant increase in self-efficacy for both youth and parents.

The study signaled areas for improvement. The main adaptation made to the B2S manual was to increase emphasis on the importance of the school meetings and the timing of these. Several adaptations to the study procedure were also identified. First, to ensure adequate recruitment for the RCT more effort will be made to get information about the B2S program to professionals in the municipality and to parents. Second, parent-reported school absenteeism data will be collected at all time-points to test the validity of the register-based school absenteeism data. Finally, more psychologist resources are needed because it was more time-consuming for the psychologists to implement B2S than expected. Accounting for these adaptations it seems feasible to evaluate the effectiveness of B2S in a RCT.

REFERENCES

- Arendt, K., Hougaard, E., and Thastum, M. (2014). Psychometric properties of the child and parent versions of Spence children's anxiety scale in a Danish community and clinical sample. *J. Anxiety Disord.* 28, 947–956. doi: 10.1016/j.janxdis.2014.09.021
- Attwood, G., and Croll, P. (2006). Truancy in secondary school pupils: prevalence, trajectories and pupil perspectives. *Res. Pap. Educ.* 21, 467–484. doi: 10.1080/02671520600942446
- Bools, C., Foster, J., Brown, I., and Berg, I. (1990). The identification of psychiatric disorders in children who fail to attend school: a cluster analysis of a non-clinical population. *Psychol. Med.* 20, 171–181. doi: 10.1017/S0033291700013350
- Canaway, A. G., and Frew, E. J. (2013). Measuring preference-based quality of life in children aged 6–7 years: a comparison of the performance of the CHU-9D and EQ-5D-Y—the WAVES pilot study. *Qual. Life Res.* 22, 173–183. doi: 10.1007/s11136-012-0119-5
- Carr, A. (2006). *The Handbook of Child and Adolescent Clinical Psychology*, 2 Edn. London: Routledge.
- Carroll, H. C. M. (2010). The effect of pupil absenteeism on literacy and numeracy in the primary school. *Sch. Psychol. Int.* 31, 115–130. doi: 10.1177/0143034310361674
- Chang, H. N., Bauer, L., and Byrnes, V. (2018). *Data Matters: Using Chronic Absence to Accelerate Action for Student Success*. https://www.attendanceworks.org/wp-content/uploads/2019/01/Attendance-Works-Data-Matters_010919.pdf (accessed July 30, 2019).
- Christle, C. A., Jolivette, K., and Nelson, C. M. (2007). School characteristics related to high school dropout rates. *RASE* 28, 325–339. doi: 10.1177/07419325070280060201
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Science*, 2nd Edn. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Daviss, W. B., Birmaher, B., Melhem, N. A., Axelson, D. A., Michaels, S. M., and Brent, D. A. (2006). Criterion validity of the mood and feelings questionnaire for depressive episodes in clinic and non-clinic subjects. *J. Child. Psychol. Psychiatry* 47, 927–934. doi: 10.1111/j.1469-7610.2006.01646.x
- Department for Education (2019). *Pupil Absence in Schools in England: 2017 to 2018*. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/787463/Absence_3term_201718_Text.pdf (Accessed July 30, 2019).
- Eg, J., Bilenberg, N., Costello, E. J., and Wesselhoef, R. (2018). Self- and parent-reported depressive symptoms rated by the mood and feelings questionnaire. *Psychiatry Res.* 268, 419–425. doi: 10.1016/j.psychres.2018.07.016
- Egger, H. L., Costello, E. J., and Angold, A. (2003). School refusal and psychiatric disorders: a community study. *J. Am. Acad. Child Adolesc. Psychiatry* 42, 797–807. doi: 10.1097/01.CHI.0000046865.56865.79
- Epstein, N. B., Baldwin, L. M., and Bishop, D. S. (1983). The mcmastr family assessment device. *J. Marital Fam. Ther.* 9, 171–180. doi: 10.1111/j.1752-0606.1983.tb01497.x
- Goodman, R. (2001). Psychometric properties of the strengths and difficulties questionnaire. *J. Am. Acad. Child Adolesc. Psychiatry* 40, 1337–1345. doi: 10.1097/00004583-200111000-00015

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent to participate in this study was provided by the participant, and the participants' legal guardian/next of kin where appropriate.

AUTHOR CONTRIBUTIONS

JL is the corresponding author and drafted the manuscript. MT is the principal investigator. MT and JL obtained funding for the project. MT, DJ, and JL designed the study. WS, PJ, and DH are members of the advisory board for the project. WS and DH advised in the design of the study. PJ developed the psychopathological interview used in the study. All authors were involved in the writing and editing of the manuscript.

FUNDING

The current study was funded by a grant from the Innovation Fund Denmark. The study has undergone full external peer review as part of the funding process, and the funding body have no other role in the design of the study or in the writing of the manuscript.

- Gottfried, M. A. (2014). Chronic absenteeism and its effects on students' academic and socioemotional outcomes. *JESPAR* 19, 53–75. doi: 10.1080/10824669.2014.962696
- Hannan, S., Davis, E., Morrison, S., Gueorguieva, R., and Tolin, D. F. (2019). An open trial of intensive cognitive-behavioral therapy for school refusal. *Evid. Based Pract. Child Adolesc. Ment. Health* 4, 89–101. doi: 10.1080/23794925.2019.1575706
- Heck, R. H., Thomas, S. L., and Tabata, L. N. (2013). *Multilevel and Longitudinal Modeling with IBM SPSS*, 2nd Edn. New York, NY: Routledge.
- Heyne, D., Gren-Landell, M., Melvin, G., and Gentle-Genitty, C. (2019). Differentiation between school attendance problems: why and how? *Cogn. Behav. Pract.* 26, 8–34. doi: 10.1016/j.cbpra.2018.03.006
- Heyne, D., King, N., Tonge, B., Rollings, S., Pritchard, M., Young, D., et al. (1998). The self-efficacy questionnaire for school situations: development and psychometric evaluation. *Behav. Change* 15, 31–40. doi: 10.1017/S081348390000588X
- Heyne, D., Maric, M., and Totsika, V. (2016). *Self-Efficacy Questionnaire for Responding to School Attendance Problems – 13 Item Version*. Unpublished measure. Leiden, The Netherlands: Leiden University.
- Heyne, D., Sauter, F. M., and Maynard, B. R. (2015). “Moderators and mediators of treatments for youth with school refusal or truancy,” in *Moderators and mediators of youth treatment outcomes*. Oxford, eds M. Maric, P. J. M. Prins, and T. H. Ollendick (New York: Oxford University Press).
- Heyne, D., Sauter, F. M., Ollendick, T. H., Van Widenfelt, B. M., and Westenberg, P. M. (2014). Developmentally sensitive cognitive behavioral therapy for adolescent school refusal: rationale and case illustration. *Clin. Child. Fam. Psychol. Rev.* 17, 191–215. doi: 10.1007/s10567-013-0160-0
- Heyne, D., Sauter, F. M., Van Widenfelt, B. M., Vermeiren, R., and Westenberg, P. M. (2011). School refusal and anxiety in adolescence: non-randomized trial of a developmentally sensitive cognitive behavioral therapy. *J. Anxiety Disord.* 25, 870–878. doi: 10.1016/j.janxdis.2011.04.006
- Heyne, D. A., and Sauter, F. M. (2013). “School refusal,” in *The Wiley-Blackwell Handbook of the Treatment of Childhood and Adolescent Anxiety*, eds C. A. Essau and T. H. Ollendick (Chichester: John Wiley & Sons Limited).
- Heyne, D. A., Vreeke, L. J., Maric, M., Boelens, H., and Van Widenfelt, B. M. (2017). Functional assessment of school attendance problems: an adapted version of the school refusal assessment scale-revised. *J. Emot. Behav. Disord.* 25, 178–192. doi: 10.1177/1063426616661701
- Hunt, C., Peters, L., and Rapee, R. M. (2012). Development of a measure of the experience of being bullied in youth. *Psychol. Assess.* 24, 156–165. doi: 10.1037/a0025178
- Jeppesen, P. (2017). *Transdiagnostic, Cognitive and Behavioral Intervention for in School-aged Children With Emotional and Behavioral Disturbances (MindMyMind RCT) (NCT03535805)*. Available online at: <https://clinicaltrials.gov/ct2/show/NCT03535805?term=jeppesen&rank=4:ClinicalTrials.gov> (accessed July 30, 2019).
- Kearney, C. A. (2002). Identifying the function of school refusal behavior: a revision of the School Refusal Assessment Scale. *J. Psychopathol. Behav. Assess.* 24, 235–245. doi: 10.1023/A:1020774932043
- Kearney, C. A. (2008a). An interdisciplinary model of school absenteeism in youth to inform professional practice and public policy. *Educ. Psychol. Rev.* 20, 257–282. doi: 10.1007/s10648-008-9078-3
- Kearney, C. A. (2008b). School absenteeism and school refusal behavior in youth: a contemporary review. *Clin. Psychol. Rev.* 28, 451–471. doi: 10.1016/j.cpr.2007.07.012
- Kearney, C. A., and Albano, A. M. (2007). *When Children Refuse School: A Cognitive-Behavioral Therapy Approach: Therapist Guide*, 2nd Edn. Oxford: Oxford University Press.
- Kearney, C. A., and Graczyk, P. (2014). A response to intervention model to promote school attendance and decrease school absenteeism. *Child & Youth Care Forum* 43, 1–25. doi: 10.1007/s10566-013-9222-1
- Kearney, C. A., Lemos, A., and Silverman, J. (2004). The functional assessment of school refusal behavior. *Behav. Anal. Today* 5, 275–283. doi: 10.1037/h0100040
- Kearney, C. A., and Silverman, W. K. (1993). Measuring the function of school refusal behavior - the school refusal assessment scale. *J. Clin. Child Psychol.* 22, 85–96. doi: 10.1207/s15374424jccp2201_9
- Lavooi, M. (2010). *Evaluation of the Self-Efficacy Questionnaire for Responding to School Attendance Problems*. Master diss., Leiden: Leiden University.
- Mann, M. J., Smith, M. L., and Kristjansson, A. L. (2015). Improving academic self-efficacy, school connectedness, and identity in struggling middle school girls: a preliminary study of the REAL girls program. *Health. Educ. Behav.* 42, 117–126. doi: 10.1177/1090198114543005
- Maric, M., Heyne, D. A., Mackinnon, D. P., van Widenfelt, B. M., and Westenberg, P. M. (2013). Cognitive mediation of cognitive-behavioural therapy outcomes for anxiety-based school refusal. *Behav. Cogn. Psychother.* 41, 549–564. doi: 10.1017/S1352465812000756
- Maynard, B. R., Brendel, K. E., Bulanda, J. J., Heyne, D., Thompson, A. M., and Pigott, T. D. (2015). Psychosocial interventions for school refusal with primary and secondary school students: a systematic review. *Campbell Syst. Rev.* 11, 1–76. doi: 10.4073/csr.2015.12
- Maynard, B. R., Mccrea, K. T., Pigott, T. D., and Kelly, M. S. (2013). Indicated truancy interventions for chronic truant students: a campbell systematic review. *Res. Soc. Work Pract.* 23, 5–21. doi: 10.1177/1049731512457207
- Nauta, M. H., Scholing, A., Rapee, R. M., Abbott, M., Spence, S. H., and Waters, A. (2004). A parent-report measure of children's anxiety: psychometric properties and comparison with child-report in a clinic and normal sample. *Behav. Res. Ther.* 42, 813–839. doi: 10.1016/S0005-7967(03)00200-6
- Neergaard, M. A., Olesen, F., Andersen, R. S., and Sondergaard, J. (2009). Qualitative description – The poor cousin of health research? *BMC Med. Res. Methodol.* 9:52. doi: 10.1186/1471-2288-9-52
- Niclasen, J., Teasdale, T. W., Andersen, A. M., Skovgaard, A. M., Elberling, H., and Obel, C. (2012). Psychometric properties of the Danish strength and difficulties questionnaire: the SDQ assessed for more than 70,000 raters in four different cohorts. *PLoS ONE* 7:e32025. doi: 10.1371/journal.pone.0032025
- Orsmond, G. I., and Cohn, E. S. (2015). The distinctive features of a feasibility study: objectives and guiding questions. *OTJR (Thorofare N J)* 35, 169–177. doi: 10.1177/1539449215578649
- Raudenbush, S. W., and Bryk, A. S. (2002). *Hierarchical Linear Models: Applications and Data Analysis Methods*. 2nd Edn. Thousand Oaks: Sage Publications.
- Roeser, R. W., Eccles, J. S., and Strobil, K. R. (1998). Linking the study of schooling and mental health: selected issues and empirical illustrations at. *Educ. Psychol.* 33, 153–176. doi: 10.1207/s15326985ep3304_2
- Spence, S. H. (1998). A measure of anxiety symptoms among children. *Behav. Res. Ther.* 36, 545–566. doi: 10.1016/s0005-7967(98)00034-5
- Stevens, K. (2012). Valuation of the child health utility 9D index. *Pharmacoeconomics* 30, 729–747. doi: 10.2165/11599120-000000000-00000
- Thastum, M., and Arendt, K. B. (2017). *Back2School. Manual til behandling af børn med bekymrende skolefravær [Back2School. Manual for treatment of youth with problematic school absenteeism]*. Aarhus: Department of Psychology and Behavioral Sciences, Aarhus University.
- Thastum, M., Johnsen, D. B., Silverman, W. K., Jeppesen, P., Heyne, D. A., and Lomholt, J. J. (2019). The Back2School modular cognitive behavioral intervention for youths with problematic school absenteeism: study protocol for a randomized controlled trial. *Trials* 20:29. doi: 10.1186/s13063-018-3124-3
- Undervisningsministeriet (2018). *Elevfravær 2017/2018*. Available online at: <https://uvm.dk/-/media/filer/uvm/stat/pdf18/181107-notat-elevfravaer-2017-2018.pdf> (accessed July 30, 2019).
- Vaughn, M. G., Maynard, B. R., Salas-Wright, C. P., Perron, B. E., and Abdon, A. (2013). Prevalence and correlates of truancy in the us: results from a national sample. *J. Adolesc.* 36, 767–776. doi: 10.1016/j.adolescence.2013.03.015

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2020 Lomholt, Johnsen, Silverman, Heyne, Jeppesen and Thastum. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



The Mediator Role of Academic Resilience in the Relationship of Anxiety Sensitivity, Social and Adaptive Functioning, and School Refusal With School Attachment in High School Students

İsmail Seçer^{1*} and Sümeyye Ulaş²

¹ Counseling and Guidance, Faculty of Education, Ataturk University, Erzurum, Turkey, ² Counseling and Guidance, School of Health, Gümüşhane University, Gümüşhane, Turkey

OPEN ACCESS

Edited by:

Christopher Kearney,
University of Nevada, Las Vegas,
United States

Reviewed by:

Ricardo Sanmartín,
University of Alicante, Spain
José Manuel García-Fernández,
University of Alicante, Spain

*Correspondence:

İsmail Seçer
ismail.secer@atauni.edu.tr

Specialty section:

This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Psychology

Received: 16 January 2020

Accepted: 09 March 2020

Published: 21 April 2020

Citation:

Seçer İ and Ulaş S (2020) The Mediator Role of Academic Resilience in the Relationship of Anxiety Sensitivity, Social and Adaptive Functioning, and School Refusal With School Attachment in High School Students. *Front. Psychol.* 11:557. doi: 10.3389/fpsyg.2020.00557

School has an important function in providing the environment for young people to acquire many skills and knowledge required by contemporary life, but the problems of attachment to school and problematic attendance all over the world reveal an increasing statistic. It is thought that some negative processes such as anxiety sensitivity, social and adaptive functioning, and school refusal can affect this problem. On the other hand, it is considered that the academic resilience of young people has an important protective function in terms of these risk factors. For this purpose, the mediator role of academic resilience between anxiety sensitivity, social and adaptive functioning, and school refusal and school attachment were examined in a Turkish sample of 452 high school students. In the process of data collection, the school refusal assessment scale, social and adaptive functioning scale, and academic resilience scale were adapted and used in the Turkish culture. In the data analysis, the structural equation model was used to determine the direct and indirect predictive effects between the variables. The results of the study showed that academic resilience fully mediated the relationship between anxiety sensitivity and school attachment, whereas it partially mediated the relationship between social and adaptive functioning and school refusal and school attachment. Based on the results of the study, it was evaluated that high academic resilience has a strong protective function against the problems of negative school attachment and problematic school absenteeism among young people, and this finding was discussed within the context of literature.

Keywords: anxiety sensitivity, school refusal, academic resilience, mediation, social and adaptive functioning

INTRODUCTION

School attachment and attendance are important for young people in terms of the environment they need for academic life; opportunities for the development of social competence and skills; and the ability to acquire professional skills, to solve problems, and to work together with others for a specific purpose (Tanner-Smith and Wilson, 2013; Kearney and Graczyk, 2014). Despite these

advantages, the problems of school attendance and attachment among young people have become a worldwide problem. This situation, defined as problematic school absenteeism, is defined by Kearney (2008a) and Kearney and Graczyk (2014) as showing at least 25% absenteeism for a certain period (monthly, quarterly, etc.). This includes the part-time and full-time absenteeism of a student, as well as his/her planned behavior to be late for school in the morning (Peguero et al., 2011). Problematic absenteeism is a more widespread problem especially among young people and in low socioeconomic regions (Balfanz and Byrnes, 2012) and is mainly associated with school dropout (Rumberger, 2011). On the other hand, it has a pattern related to situations such as substance use, tendency to violence, suicidal tendency, risky sexual behaviors, and being involved in crime (Kearney, 2008b; Kearney and Graczyk, 2014; Aslan, 2018), and processes such as anxiety disorders, psychological adjustment problems, and developing antisocial behaviors (McShane et al., 2001; Knollmann et al., 2010; Rocque et al., 2017; Mazerolle et al., 2018). In this sense, it can be inferred from the results of these studies that problematic absenteeism is a problem area related to many of the personal, social, and academic characteristics of young people (Fornander and Kearney, 2019).

Researchers have found that the problem of school attendance is affected by the young people themselves, family, peers, and school environment (Burrus and Roberts, 2012; Ingul et al., 2012; Havik et al., 2014, 2015; McKee and Caldarella, 2016). Especially when the risks arising from family are considered, family functions including processes such as *domestic communication problems, role ambiguity, parental attitudes, and deterioration of family integrity* (Lagana, 2004) are thought to have an important place in this sense. It is thought that problematic domestic processes and deterioration in family functions may trigger school refusal, a problem that is thought to be closely related to the school attendance problem in young people by negatively affecting the process of turning to risky behaviors like school absenteeism (Jaycox and Repetti, 1993; Chen et al., 2017).

School refusal is defined as a phenomenon that includes severe symptoms like complete or partial absenteeism, chronically being late for school, developing deliberate behavior attempting to skip school in the morning, or accelerating the demand for future absence (Kearney and Bensaheb, 2006). School refusal is a problematic behavior that manifests with the child's unwillingness to stay at school due to the strong negative emotions he/she feels at school and the desire not to come to school. It is also suggested that school refusal, which is considered an increasingly common condition in child psychiatry, should be considered as a child mental health problem (Kearney and Albano, 2004; Blumkin, 2016). However, studies on the diagnosis, evaluation, epidemiology, clinical features, follow-up, and treatment of school refusal are limited, and therefore, there is still controversy regarding the definition and evaluation of the concept of school refusal (Kearney and Bensaheb, 2006). Although school refusal was structured by Kearney and Silverman (1993), it was classified into four main categories by Heyne et al. (2019) as school refusal, truancy, school withdrawal, and school exclusion. However, the functional analytic approach proposed by González et al. (2019a) and

especially by Kearney (2002) suggests that a combination of the two-dimensional processes of avoiding stressful situations and avoiding negative stimuli from school constitutes the main ground for school refusal. Studies have shown that school refusal, whose prevalence varies between 5 and 28% (Fornander and Kearney, 2019) among young people, is adversity that threatens the academic and normal lives of young people in the short and long term. Short-term outcomes include academic failure, being away from schoolwork, peer isolation, legal and financial difficulties, conflict with parents, and so on. Long-term outcomes include school dropout, feeling guilty, economic problems, difficulties in professional life and marriage, substance abuse, and adulthood psychological problems (Kearney and Bensaheb, 2006; Rocque et al., 2017; Mazerolle et al., 2018).

As explained above, school refusal is a common problem among young people, and although this problem is handled differently by professionals with different terminologies, it is often seen as an anxiety-based problem by psychologists (Last and Strauss, 1990; Kearney and Bensaheb, 2006; Richards and Hadwin, 2011; Kearney and Graczyk, 2014). Last and Strauss (1990) associate anxiety-based school refusal with separation anxiety disorder, which usually occurs due to incorrect attachment processes between mother and child. Phobias, another type of anxiety, appear to be an important factor in school refusal, and the concept of school phobia is used in some sources to replace school refusal (Hansen et al., 1998; Heyne et al., 2001; King and Bernstein, 2001; Egger et al., 2003; Kearney and Albano, 2004; Aaron and Cotler, 2009). Researchers found that anxiety-related disorders commonly associated with school refusal were separation anxiety (Hansen et al., 1998; Heyne et al., 2001; King and Bernstein, 2001; Egger et al., 2003; Kearney and Albano, 2004), generalized anxiety disorder (Heyne et al., 2001; Egger et al., 2003; Kearney and Albano, 2004), social anxiety disorder (Heyne and King, 2004; Kearney and Bates, 2005), mood disorders (Last and Strauss, 1990; Last et al., 1998; Egger et al., 2003), and social and specific phobia (Hansen et al., 1998; Heyne et al., 2001; King and Bernstein, 2001; Egger et al., 2003). However, although school refusal is considered as an anxiety-based disorder, it has been associated with anxiety sensitivity in recent years (Last and Strauss, 1990; King and Bernstein, 2001; Seçer, 2015; Aslan, 2018).

Anxiety sensitivity was explained by Petersan and Reiss (1992), with the expectation model of fear. Accordingly, it is considered that excessive fear and a tendency to avoid that anxiety-related symptom causing avoidance behavior in an individual may result in negativity due to any event or situation that causes fear (McNailly, 2002). Çakmak and Ayvaşık (2007), on the other hand, described it as "fear of fear" or "fear of anxiety" caused by the thought that the anxiety symptoms of the person would cause embarrassment and higher anxiety. Although anxiety sensitivity is clinically perceived as the same concept as expectation anxiety in panic disorder, it is a basic state of fear that exists in the structure of the person and shows continuity (Petersan and Reiss, 1992), and it has a function of reinforcing behaviors to avoid negative situations in the individual (McHugh and Otto, 2012), while expectation anxiety is defined as the anxiety that an individual experiences after

panic attacks and that the individual will experience a panic attack again. Therefore, it is thought that anxiety sensitivity plays a role in the emergence and formation of school refusal, and in this way, it may trigger the problem of school attachment and problematic school absenteeism. Although there are still limited studies (Aslan, 2018) on the direct relationship between anxiety sensitivity and school refusal, researchers have found that anxiety sensitivity has a negative effect on the occurrence and maintenance of obsessive-compulsive disorder, panic attack, agoraphobia, depression, and other anxiety and mood disorders in young people (Cox et al., 1991; King and Bernstein, 2001; Grant et al., 2007; Mantar et al., 2011; Seğer, 2014a; Otto et al., 2016). Therefore, it is thought that anxiety sensitivity may increase the risk of avoidance reactions in young people against problematic situations. In this context, it is thought that anxiety sensitivity may be an important risk factor in terms of strengthening avoidance reactions in terms of coping with negative processes toward school (McHugh and Otto, 2012).

Social and adaptive functioning is another concept that is thought to be related to school attachment and problematic school absenteeism in young people (González et al., 2019a). Social and adaptive functioning is defined as a quality that includes cognitive, emotional, and linguistic processes related to a person's social skills (Price et al., 2002; Crowe et al., 2011), and these processes have a significant impact on the individual's personal, social and academic life (González et al., 2019b). As a matter of fact, researchers have demonstrated the effects of social and adaptive functioning on academic processes (Talwar et al., 2017; Vicent et al., 2017), negative peer and family relationships (Kandel and Davies, 1982), poor family relationships, and effective adaptation to school (Fernández-Zabala et al., 2016). The fact that social and adaptive functioning is related to school adaptation skills can be considered as an important protective variable, but it is thought that the relationship between school attachment, school refusal, skipping school, etc. has not been fully elucidated in the literature yet. The relationship between school refusal and social and adaptive functioning has been examined through four different school refusal profiles defined as *non-school refusers*, *school refusers by tangible reinforcements*, *school refusers by negative reinforcements*, and *they found that non-school refusers* had a high level of functioning in all four structures (peer relationships, family relationships, and school performance and personal care) that constituted social and adaptive functioning, whereas *school refusers by mixed reinforcements* have low social and adaptive functioning, particularly in school performance and family and peer relationships. The results of this study suggest that there may be a strong relationship between school refusal and social and adaptive functioning and that social and adaptive functioning may have an important protective function for school refusal. Therefore, it can be considered that high social and adaptive functioning among young people is an important factor that shapes the problem of school attachment and problematic school attendance. It is thought that further experimental and empirical studies are needed to address relationship networks of these variables from an early age and to broaden our perspective in this direction (González et al., 2019b).

As explained above, problematic school absenteeism problems among young people are becoming a widespread problem throughout the world. In line with the information related to the literature, some qualifications such as anxiety sensitivity and school refusal deepen the problems of attachment to school and attendance among young people, whereas some skills such as social and adaptive functioning have a protective function. On the other hand, it is considered that the concept of academic resilience can have a regulatory function between the variables that have risk and protective characteristics and problematic school absenteeism during the occurrence and formation of problematic school absenteeism among young people. Psychological resilience is defined as overcoming the negative effects of risky situations that individuals are exposed to, successfully coping with traumatic experiences, and showing flexible and successful compliance despite the negative factors associated with these risks (Luthar et al., 2000; Masten and Powell, 2003, s. 1; Martin and Marsh, 2006). Bernard (1995) stated that social competence, problem-solving skills, and autonomy are related to being future-oriented and high future expectation, and Werner and Smith (1992) and Martin and Marsh (2006) stated that strong communication skills, effective time management, high sense of responsibility, being academically successful, being self-controlled, having high adaptation skills, and a positive self-perception are indicators of psychological resilience. In this context, academic resilience is defined as the tendency to show academic stability and success despite social and psychologically stressful and challenging life events (Alva, 1991; Benard, 1991; Wang et al., 1997; Perez et al., 2009). Students with high academic resilience are expected to show high levels of stability and success despite the presence and adverse effects of risky and stressful events (Alva, 1991; Martin and Marsh, 2006). In the literature, studies on the effects of academic resilience on school attachment and problematic school absenteeism are very limited. Ingul and Nordahl (2013) found that psychological resilience plays an important role in reducing school dropout among young people. Thus, resilience can play a key role in the emergence of problems such as school attachment, problematic school absenteeism, and school dropout. In this context, considering the variables mentioned above, it is thought that high anxiety sensitivity and school refusal behavior among the young pose a significant risk on school attachment and problematic absenteeism (Aslan, 2018), but academic resilience can reduce this risk. It is considered that through academic resilience, school attachment processes will be affected positively by social and adaptive functioning, which has positive effects on school attachment and the reduction of problematic school absenteeism. In this sense, it is thought that academic resilience may have a mediatory function among these variables and affect school attachment and problematic school absenteeism in young people.

The Current Study

The purpose of this study is to examine the mediating role of academic resilience between school attachment and anxiety sensitivity, social and adaptive functioning, and school refusal among young people. For this purpose, the research process is structured around the following questions: 1. Do anxiety

sensitivity, social and adaptive functioning, and school refusal predict school attachment? 2. Does academic resilience play a mediating role in the relationship of anxiety sensitivity, school refusal, and social and adaptive functioning with school attachment in young people? Determining the possible mediator role of academic resilience between school attachment and anxiety sensitivity, social and adaptive functioning, and school refusal is considered to contribute to broadening our perspective and shaping intervention and action plans for reducing problematic school attendance problems among young people. Although there is a good amount of fund of knowledge related to school refusal with the scientific studies conducted on problematic school attendance specific to Turkey, it is not possible to say that school refusal, social and adaptive functioning, academic resilience, etc. are not yet sufficiently addressed with problematic school attendance in Turkey. It is believed that this is because an adequate level of fund of knowledge hasn't been formed sufficiently to expand the perspectives of field experts and field workers, and therefore, preventive and rehabilitative studies are limited. Thus, it is thought that the results obtained from this study will deepen the perspectives on the nature of the problematic school attendance among young people in Turkey. In this context, answers to the following questions were sought in the research process.

- 1 Are anxiety sensitivity, social and adaptive functioning, and school refusal significant predictors of school attachment in young people?
- 2 Is academic resilience a significant predictor of school attachment?
- 3 Does academic resilience play a role in the predictive relationship of anxiety sensitivity, social and adaptive functioning, and school refusal with school attachment?

MATERIALS AND METHODS

Participants

The participants of the study consisted of 452 high school students (with an average of age of 15.13, $sd = 1.64$) aged between 13 and 18. Of the participants, 47.8% were males and 52.2% were females. A two-stage process was followed in the process of identifying the participants. In the first stage, high schools were grouped according to the cluster sampling method, and the schools to be sampled by random sampling were determined. In the process of identifying the students to be included in the data collection process from the selected schools, the convenience sampling method was applied. In this process, teachers' and school psychologists' opinions were taken into consideration in order to identify the participants. Therefore, the guidance of school counselors was particularly used in order to include children who attend school regularly as well as children with problematic school absenteeism. The participants consisted of young people, 31% of whom did not have any problematic attendance in the last term, 29% of whom had between 1 and 3 days of absenteeism, 24% of whom had between 4 and 6 days of absenteeism, 10% of whom had between 7 and 10 days, and

5% of whom had 11 days. In addition, when the distribution of participants in terms of school refusal profiles is examined, 61% of them are in the *non-school refusers group*, 21% are in the *school refusers by mixed reinforcements group*, 10% are in the *school refusers by tangible reinforcements group*, and 8% are in the *school refusers by negative reinforcements group*.

MEASURES

School Refusal Assessment Scale

It was developed to evaluate school refusal behavior in children and adolescents by Christopher and Silverman (1993) and revised by Heyne et al. (2017). The scale is a Likert-type scale consisting of 24 items and four sub-dimensions. In the revision process, the scale was tested on 24 items with the addition of new items by removing some items in the first version, and it was observed that it included 22 items and four sub-dimensions. The pre-revision form of the scale was adapted to Turkish culture by Seğer (2015), and it was determined that the form consisting of a total of 19 items and four sub-dimensions was compatible with the Turkish culture. The psychometric properties of the revised form were also examined with 485 children and adolescents aged 10–18 years. In the adaptation process, Heyne et al. (2017) tested the two items that were found to be not a good fit, and the four-factor structure of the scale consisting of 24 items was found to be a good fit in the Turkish culture ($\chi^2/sd = 2.21$, RMSEA = 0.061, NFI = 0.97, CFI = 0.98, GFI = 0.94). The Cronbach alpha value for the reliability analysis of the scale was found to be 0.85 for the scale total, and 0.87, 0.85, 0.83, and 0.84 for the sub-dimensions, respectively. As a result of the analysis of the factor structure and reliability of the scale in the adaptation process, it was evaluated that the psychometric properties of the scale were sufficient (Seğer, 2015). The sub-dimensions of the scale are avoidance of negative situations related to school, having difficulty in engaging socially, resisting to leave parents, and being interested in out-of-school activities. The scale is scored as 1 (never) to 4 (always), and the scores on the scale range from 24 to 96. High scores obtained from the sub-dimensions and the total of the scale indicate a high level of school refusal.

Anxiety Sensitivity Index

It is a Likert-type scale developed by Silverman et al. (1991) and adapted to Turkish culture by Seğer and Gülbahçe (2013). The scale consists of 15 items and three sub-dimensions, physical, psychological, and social. The adaptation process of the scale was carried out with children and adolescents aged 12–18 years. In this research process, the validity of the model fit of the scale was re-examined with confirmatory factor analysis, and the fit indices ($\chi^2/sd = 1.06$, RMSEA = 0.023, NFI = 0.9, CFI = 0.99, GFI = 0.92) were determined to be good. The Cronbach alpha of the scale was 0.82, 0.91, and 0.90 for the sub-dimensions, respectively. The scale is scored as 1 (never) to 5 (generally), and the scores that can be obtained from the scale vary between 15 and 75. High scores on the subscales and the total of the scale indicate a high level of anxiety sensitivity.

Academic Resilience Scale

It is a Likert-type scale developed by Cassidy (2016) to measure processes related to academic resilience and includes four sub-dimensions. Although the original scale form was developed for university students, the psychometric properties of the high school population of 327 people were also examined during the adaptation process to Turkish culture (Ulaş and Seçer, 2020). Findings from the high school population indicated that the scale's 22 items and three sub-dimensions were well adapted to Turkish culture ($\chi^2/sd = 2.16$, RMSEA = 0.062, NFI = 0.98, CFI = 0.98, GFI = 0.96). The Cronbach alpha for the sub-dimensions was 0.82, 0.79, and 0.82, respectively. The sub-dimensions of the scale are perseverance, reflecting and adaptive help-seeking, negative effect, and emotional response. The scale is scored as 1 (never) to 4 (always), and the scores on the scale range from 22 to 88. High scores obtained from the sub-dimensions and the total of the scale indicate a high level of academic resilience among the youth.

Social and Adaptive Functioning Scale

It is a self-report measure developed by Price et al. (2002) to examine social and adaptive functioning in children and the young. The scale was adapted to Turkish culture as a part of this research process, and its psychometric properties were examined. After conducting linguistic equivalent studies and pilot applications, the psychometric properties of the scale were examined. In this context, the construct validity of the scale was examined with 341 high school students between the ages of 14 and 18. The results obtained from the confirmatory factor analysis showed that the scale form consisting of 20 items and four sub-dimensions was well adapted in Turkish culture ($\chi^2/sd = 2.25$, RMSEA = 0.057, NFI = 0.98, CFI = 0.98, GFI = 0.96). The Cronbach alpha for the sub-dimensions was 0.83, 0.81, 0.79, and 0.84 for the sub-dimensions, respectively. The sub-dimensions of the scale were family relationships, peer relationships, home duties, and school performance. The scale is scored as 1 (never) to 4 (always), with scores ranging from 20 to 80. High scores obtained from the sub-dimensions and the total of the scale indicate a high level of social and adaptive functioning in young people.

School Attachment Scale

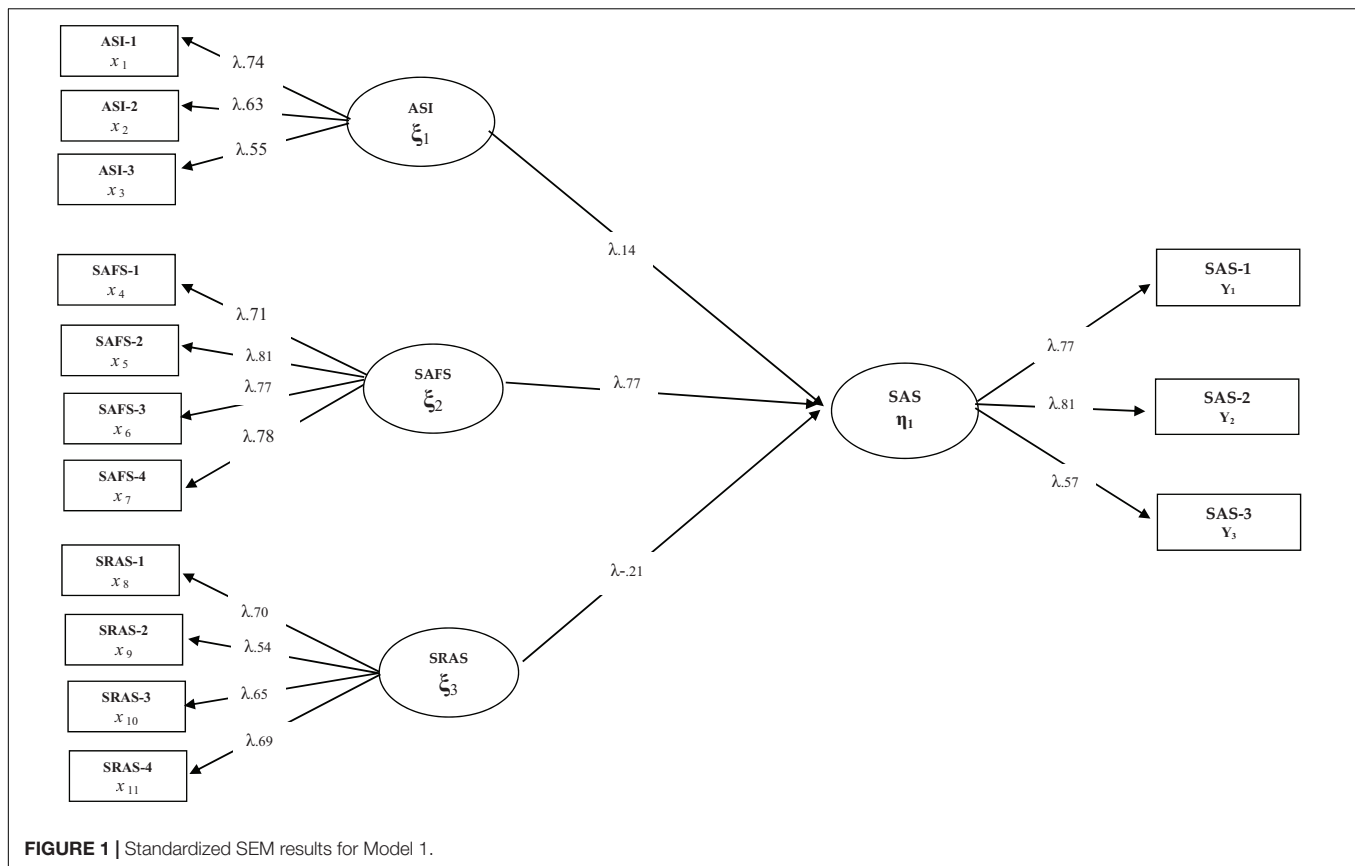
It is a self-report scale developed by Hill and Werner (2006) in order to evaluate the level of attachment of children and adolescents to school and adapted to Turkish culture by Savi (2011). In the adaptation process of the scale, exploratory factor analysis was performed, and it was observed that the scale, which consisted of 15 items and three sub-dimensions in its original form, had a good fit with 13 items and three sub-dimensions in Turkish culture. In this research process, the psychometric properties of the scale were re-examined, and it was determined that the scale maintained the model fit ($\chi^2/sd = 2.96$, RMSEA = 0.071, NFI = 0.95, CFI = 0.96, GFI = 0.94). The Cronbach alpha values were 0.78 for attachment to school, 0.81 for attachment to teacher, and 0.83 for attachment to friend. The scale is scored as 1 (never) to 4 (always), with scores ranging from 13 to 52. High scores obtained from the sub-dimensions and the

total of the scale indicate a high level of attachment to school among young people.

PROCEDURE AND DATA ANALYSES

In the first stage of the study, two different procedures were performed. In the first-procedure stage, research permission was obtained from Atatürk University Educational Sciences Ethics Committee, and in the second-procedure stage, necessary permissions were obtained from local administrators for conducting the research. Parents' approvals were gotten through the school administrations after the permissions had been granted, and measurement tools were applied to the students who wanted to participate only voluntarily under the guidance of the school counselor. The data collection process took ~15 days, and the application period of the measurement tools took ~20 min. Data collection was carried out by two researchers with expertise in the field of psychology and psychological counseling. Optical forms were used in the data collection process, and the OMR REMARK survey program was used to transfer the collected data to the computer environment. For the data transferred to the computer environment, missing data analysis was first performed by SPSS 21 software, and the scales containing 5% loss data were removed from the data set as suggested (Bell et al., 2009; Graham, 2009). In this context, data belonging to 11 people were excluded from the scale form. In the second stage, skewness, kurtosis, and Mahalanobis and Cook's calculations were made for extreme value analysis, and it was decided to extract the data belonging to nine people. In the third stage, the normality values were examined by LISREL9 software, and it was found that the data set showed normal and homogeneous distribution when the transformation process was applied.

After the parametric conditions had been fulfilled, the confirmatory measurement model and structural equation models were tested in order to seek answers to the research questions. Three different models were tested in the structural equation model. In Model 1, it was tested whether anxiety sensitivity, school refusal, and social and adaptive functioning directly predicted school attachment. In Model 2, academic resilience was included in the model with anxiety sensitivity, and it was tested whether school refusal and social and adaptive functioning predicted school attachment both directly and through academic resilience. In Model 3, the full mediating role of academic resilience among these variables was tested. Schumacher and Lomax (2004) and Tabachnick and Fidell (2013) suggest that the fit indices in structural equation modeling should be ≥ 0.90 for acceptable fit and ≥ 0.95 for perfect fit for, TLI (Tucker-Lewis Index), CFI (Comparative Fit Index), NFI (Normed Fit Index), NNFI (Non-Normed Fit Index), and IFI (Incremental Fit Index); ≥ 0.85 for acceptable fit and ≥ 0.90 for perfect fit for GFI (Goodness-of-Fit Index) and AGFI (Adjusted Goodness-Of-Fit Index); and ≤ 0.08 for acceptable fit and ≤ 0.50 for perfect fit for RMR (Root Mean Square Residual), REMSEA (Root Mean Square Error of Approximation), and SRMR (Standardized Root Mean Square Residual). A two-stage process was followed in the data analysis process. In the



first stage, the confirmatory measurement model was applied for the fit of the hypothesized models. Five different implicit variables (anxiety sensitivity, school refusal, social and adaptive functioning, academic resilience, and school attachment) and 17 observed variables represented by these implicit variables were used in the confirmatory measurement model. The verification of measurement models is an important prerequisite for testing structural equation models (Şimşek, 2007, s. 117). The indices of fit obtained from the measurement model are as follows: $\chi^2(109) = 211.67/sd = 1.94$; CFI = 0.96; GFI = 0.95; SRMR = 0.06; RMSEA = 0.06]. These show that all implicit variables fit well with the indicator variables they represent and other implicit variables (Tabachnick and Fidell, 2013). The models created for the purpose of the research were tested with a two-stage process. In the first stage, the direct predictive effects of anxiety sensitivity, school refusal, and social and adaptive functioning on school attachment were tested. In the second stage, the mediation role of academic resilience among these variables was examined, and indirect effects were determined.

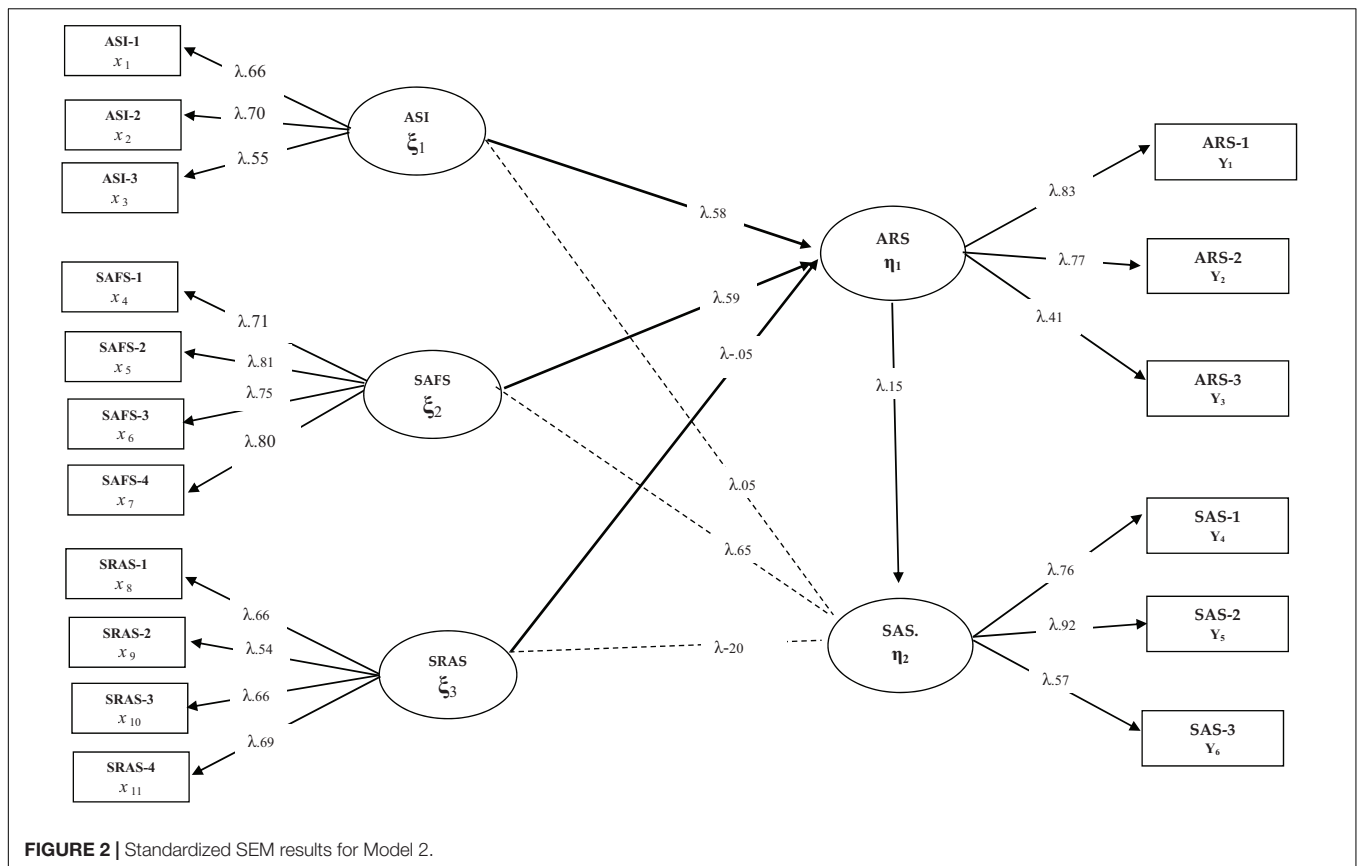
RESULTS

After the validation of the measurement model, three different models that were formed for the purpose of the research were tested respectively. In this context, Model 1 tested the direct predictive effect of anxiety sensitivity, school refusal, and

social and adaptive functioning on school attachment. In Model 1, anxiety sensitivity and social and adaptive functioning are expected to predict school attachment positively, and school refusal predicts school attachment negatively. The obtained findings related to Model 1 are presented in Figure 1.

When the fit indices [$\chi^2(71) = 187.34/sd = 2.43$; CFI = 0.94; GFI = 0.92; RMSEA = 0.077] of the model tested in Figure 1 are considered, it can be said that all the implicit variables in Model 1 have a significant relationship with the observed variables they represent ($p < 0.01$). Model 1 shows that three implicit variables explaining school attachment fit well, anxiety sensitivity and social and adaptive functioning predict school attachment positively, and school refusal predicts school attachment negatively as expected ($\beta = 0.77, p < 0.01, \beta = -0.21, p < 0.01, \beta = 0.14, p < 0.01$). When the findings and explanation coefficients are taken into consideration, it is understood that social and adaptive functioning has a strong effect on school attachment (59%), followed by school refusal and anxiety sensitivity, respectively.

After verification of the hypothesis in Model 1, the second stage of mediation relationships should be applied. At this stage, the mediating effect of the model is included, and the parameters related to the direct and indirect relationship processes between the predicting variables and the predicted variable are examined. In this context, academic resilience was included in the model designed in Model 1 between anxiety sensitivity, social and adaptive functioning, and school refusal and school attachment,

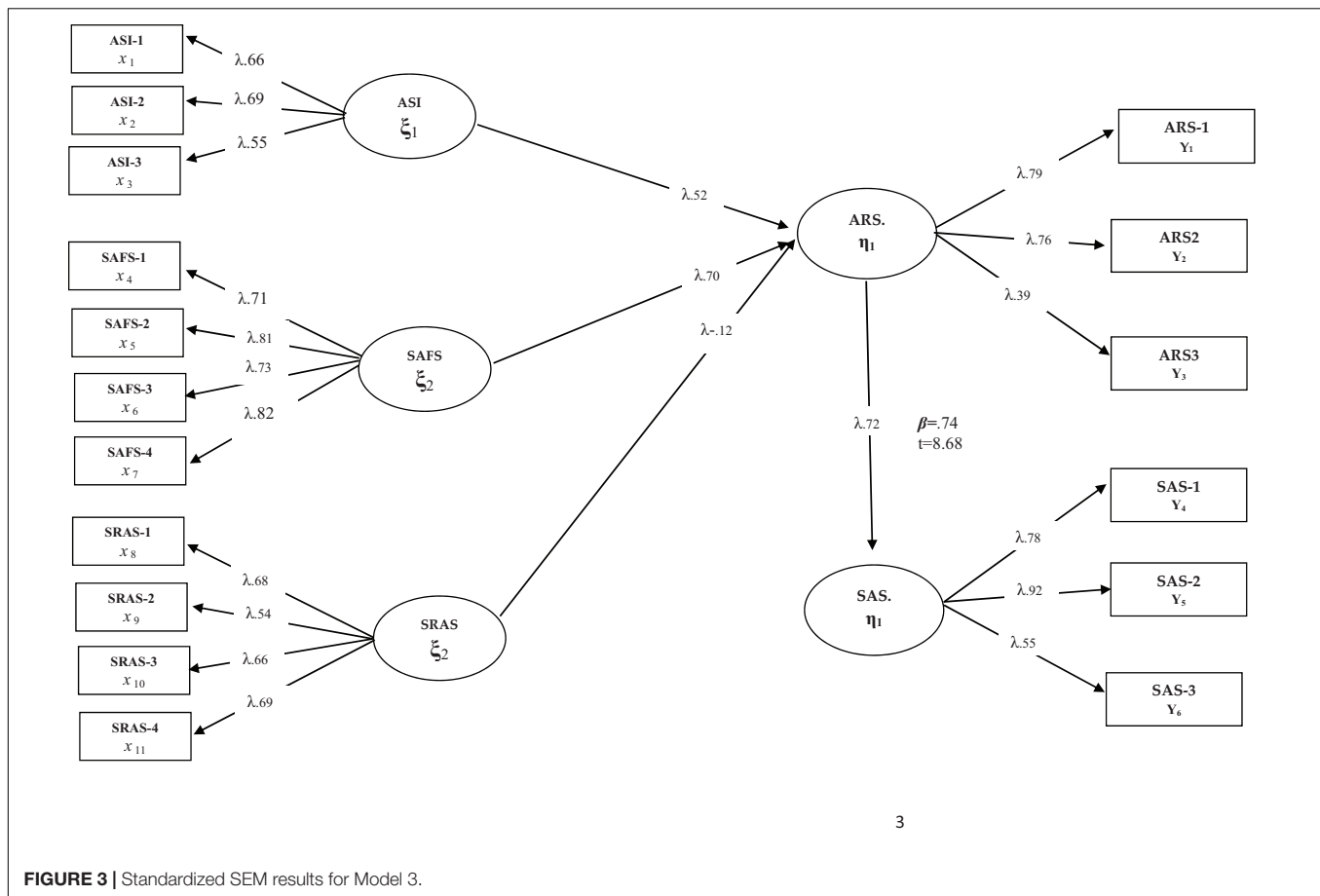


and it was tested as Model 2. The findings related to Model 2 are presented in **Figure 2**.

Considering the findings of **Figure 2**, a significant change was observed in the parameters reached in Model 1 after the academic resilience variable had been included in the model. Considering the model fit indices, it is understood that the fit indices of Model 2 are not sufficient [$\chi^2(94) = 565.20/sd = 6.01$; CFI = 0.92; GFI = 0.089; SRMR = 0.10; RMSEA = 0.10]. On the other hand, while anxiety sensitivity had a significant effect on school attachment ($\beta = 0.14, p < 0.01$) in Model 1 when **Figure 2** was examined, this significant relationship disappeared after including the academic resilience variable ($\beta = 0.05, p > 0.01$) in Model 2. School refusal had a significant effect on school attachment ($\beta = 0.31, p < 0.01$) in Model 1, but it decreased ($\beta = -0.20, p > 0.01$) after including the academic resilience variable to the model. In terms of social and adaptive functioning, it is seen that the correlation coefficient in Model 1 ($\beta = 0.77, p < 0.01$) shows a significant decrease with the addition of the academic resilience variable ($\beta = 0.65, p < 0.01$). With the addition of the academic resilience variable to the model, observing a significant change in the relationship coefficients between the variables can be considered as a strong sign that mediation relationships may exist. In addition, when **Figure 2** is examined, it is seen that the predictive effect of academic resilience on school attachment is not significant if there are direct and indirect paths between the variables ($\beta = 0.15, p < 0.01$). For this reason, the full mediating role of the academic resilience variable was tested by removing

the direct paths from anxiety sensitivity, school refusal, and social and adaptive functioning variables to school attachment. This model, called Model 3, deals with the full mediation relationships between variables. The structural model dealing with the full mediation relationship is presented in **Figure 3**.

The indices and parameters of Model 3 testing the full mediating role of academic resilience [$\chi^2(97) = 156.79/sd = 1.61$; CFI = 0.97; GFI = 0.96; SRMR = 0.053; RMSEA = 0.054] show that the mediation of the tested model and academic resilience is verified. When **Figure 3** is examined, it can be seen that anxiety sensitivity ($\beta = 0.62, p < 0.01$), social and adaptive functioning ($\beta = 0.70, p < 0.01$), and school refusal ($\beta = 0.12, p < 0.01$) predicted school attachment through academic resilience. Considering the Model 2 parameters, it is understood that there are significant improvements in the statistical values after removing the paths showing low or insignificant predictions from the model. Therefore, both the good fit of the hypothesized model and the observation of a significant change in the path coefficients between the variables were considered as indicators of the mediating role of academic resilience. In addition, the predictive effect of academic resilience on school attachment was determined as $\beta = 0.72, p < 0.01$. Compared to Model 2, it is thought that there is a significant increase in the predictive coefficient of academic resilience on school attachment ($\beta = 0.15, p < 0.01$) and that these values are obtained by subtracting the low or insignificant relationship paths in Model 2 from the model.



DISCUSSION

The Relationship Process of Anxiety Sensitivity, School Refusal, and Social and Adaptive Functioning With School Attachment and the Mediator Role of Academic Resilience

According to the results of the study, the predictive effect of variables that have a predictive effect on school attachment in youth can be discussed in two ways. The first is direct effects, and the second is indirect effects. The effects of anxiety sensitivity, social and adaptive functioning, and school refusal on school attachment can be discussed as direct effects. The predictive effect of anxiety sensitivity, school refusal, and social and adaptive functioning on school attachment can be discussed through the academic resilience variable as indirect effects.

The results of the study showed that anxiety sensitivity had a positive effect on school attachment. Anxiety sensitivity is explained by the “expectancy model of fear” in the relevant literature (Reiss and McNally, 1985; Çakmak and Ayvaşık, 2007). In other words, the individual has an intense expectation that negative situations will emerge, and he/she reacts to avoid and has a feeling of fear toward certain negativities that may occur in school. In this respect, it is thought that anxiety sensitivity is likely

to turn into a pressure tool on problematic school absenteeism processes. Based on the results of the research that reveals the relationship between anxiety sensitivity and psychological problems such as mood disorders, depression, agoraphobia, and OCD (Obsessive Compulsive Disorders) (Cox et al., 1991; King and Bernstein, 2001; Grant et al., 2007; Mantar et al., 2010; Seçer, 2014a), it can be considered that a high anxiety sensitivity level will have a negative effect on school attendance in young people. In addition, although anxiety sensitivity had a low predictive effect on school attachment in Model 1, this effect disappeared in Model 2, in which academic resilience was included in the analysis, which means anxiety sensitivity does not have a direct effect on school attachment and strongly influences school attachment through the academic resilience variable.

Including the academic resilience variable in Model 2, the direct predictive effect of anxiety sensitivity on school attachment disappeared, indicating the mediator role of academic resilience and that type II error was prevented. Academic resilience is seen as a dimension of psychological resilience, and it is defined as showing academic stability and success despite the psychological and social stressors encountered in school-related processes and challenging academic processes (Wang et al., 1994; Perez et al., 2009). In this respect, it can be said that academic resilience is an important protective feature in terms of school attachment and overcoming problematic school absenteeism

problems. In the literature, there are very limited study findings that address the effect of academic resilience on processes like school attachment. The results obtained from these studies show that academic resilience is an important factor in preventing school dropout problems in young people (Ingul and Nordahl, 2013). The results obtained from Model 2, which tested the full mediation of academic resilience, show that anxiety sensitivity predicts academic resilience and academic resilience predicts school attachment in a positive and powerful way. Based on these results, it is considered that contrary to what is believed, anxiety sensitivity does not have a completely negative quality and is a factor that reinforces academic resilience in young people and positively affects school attachment processes in young people. Nonetheless, it should be taken into consideration that the fact that there are very limited research findings significantly limited our perspective on the interpretation of the results obtained from the research.

The second variable whose direct and indirect effects were examined on school attachment was social and adaptive functioning. Social and adaptive functioning is defined as a quality that includes cognitive, emotional, and linguistic processes related to an individual's social skills (Price et al., 2002; Crowe et al., 2011). The results of the study showed that social and adaptive functioning positively and strongly predicted school attachment in young people in Model 1, but there was a significant decrease in the predictive coefficient with the inclusion of academic resilience in Model 2. The obtained results indicate that social and adaptive functioning predicts school attachment both directly and indirectly through academic resilience. Therefore, the continuation of the direct impact after the academic resilience variable was included in the model indicates a partial mediation relationship. Nevertheless, although studies on the impact of social and adaptive functioning on school attachment processes are limited (Talwar et al., 2017; Vicent et al., 2017; González et al., 2019b), it is seen that they support the findings obtained from this study. Therefore, it is thought that social and adaptive functioning has a very strong protective feature in terms of overcoming the problems of school attendance and problematic school absenteeism among young people, and high academic resilience reinforces this effect. In other words, a high level of social and adaptive functioning and high academic resilience are considered to be a powerful tool in ensuring positive school processes in young people. As in anxiety sensitivity, the fact that there are a limited number of studies in the literature for social and adaptive functioning can be considered as a factor limiting the perspective in this direction and weakening the interpretations. Therefore, it is clear that more research findings are needed in this direction.

The third variable whose direct and indirect effect on school attachment was examined in the study is school refusal. School refusal is an anxiety-based problem that is related to complete or partial absenteeism, chronically being late for school, developing deliberate behavior attempting to skip school in the morning, or accelerating the demand for future absence (Kearney and Bensaheb, 2006). The findings of the study show that school refusal, which has become a widespread problem among young people, negatively and directly predicts school attachment.

This finding is consistent with the literature, and school refusal is a problem that triggers problematic school absenteeism problems among young people. However, it is thought that academic resilience plays an important role in limiting the negative effect of school refusal on school attachment. The findings of the study show that school refusal predicts academic resilience negatively. Considering the positive role of academic resilience in school attachment, it is thought that a high level of academic resilience may serve as a protective function in terms of possible school refusal behavior in young people, which provides a basis for school attachment and problematic school absenteeism problems. Based on studies that reveal the relationship between separation anxiety (Hansen et al., 1998; Heyne et al., 2001; King and Bernstein, 2001; Egger et al., 2003; Kearney and Albano, 2004), generalized anxiety disorder (Heyne et al., 2001; Egger et al., 2003; Kearney and Albano, 2004), social anxiety disorder (Heyne and King, 2004; Kearney and Bates, 2005), and mood disorders in children who refuse school, it can be said that school refusal is likely to turn into a pressure tool on school attachment and attendance problems due to the close relationship with psychological problems among young people. Therefore, it is thought that academic resilience plays a protective role in reducing or even preventing the negative effects of school refusal and related psychological problems on school attachment and attendance processes of young people. Although limited research findings in this field limit our point of view, it is considered that high academic resilience will have a protective function against problematic school attendance problems that may arise due to school refusal in young people and positively affect school attachment.

LIMITATIONS AND FUTURE RESEARCH

The findings of this study should be evaluated in the context of its limitations. Firstly, the relational and cross-sectional nature of the study and the fact that the sampling process relies heavily on convenience sampling have an important limitation in terms of establishing cause-effect relationships. In addition, measuring the qualifications of young people based solely on self-reporting is an important limitation. Therefore, the choice of mixed research approaches, including the views of parents, teachers, etc., through triangulation, may offer a broader perspective. In addition, conducting the research only with high school students is another limitation. Therefore, it may broaden our perspective to diversify similar research, including other teaching levels and age groups. Another limitation is that the research findings were conducted only with children from a Turkish sample. It is considered that conducting similar research in different cultures and countries will make significant contributions to the literature in order to understand the cultural aspects of problematic school absenteeism problems among young people.

IMPLICATIONS

The results of the research are considered to have significant effects for both relevant researchers and school counselors

and school psychologists. It is considered that determining the protective role of academic resilience in terms of school attachment and overcoming problematic school absenteeism problems in young people will shed light on the preventive and intervention practices of school professionals and broaden their perspectives. For the researchers, it is expected that this will provide important impacts in terms of testing holistic and causal models for understanding the problems of school attachment and problematic school absenteeism and revealing a theoretical process for developing applications especially for strengthening academic resilience.

DATA AVAILABILITY STATEMENT

All datasets generated for this study are included in the article/supplementary material.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Atatürk University Educational Sciences Ethics

Committee. The patients/participants' guardian provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

As a result of the literature review of the relevant field, İS and SU acted jointly in the process of revealing the research idea. After determining the subject of the research, İS and SU took an active role in completing the research procedures. İS and SU conducted the research process, like research permits, ethics committee approvals, and interviews with schools to collect data. The data collection process was a process that İS and SU carried out together. The transfer of the collected data to the computer environment and the examination of their suitability and parametric test conditions for analysis were done by İS. Data analysis and reporting processes were completed by SU. In the writing process of the study, the *Introduction* and *Discussion* parts were completed by İS significantly, and SU contributed to this process. The methods and findings sections were prepared for publication by SU and contributed by İS. During the publication of the article, the feedback from the editors and the referees was organized together by İS and SU.

REFERENCES

- Aaron, R. L., and Cotler, S. (2009). Multi-systemic intervention for school refusal behavior: integrating approaches across disciplines. *Adv. Sch. Ment. Health Promot.* 2, 20–34. doi: 10.1080/1754730X.2009.9715695
- Alva, S. A. (1991). Academic invulnerability among Mexican-American students: the importance of protective resources and appraisals. *Hisp. J. Behav. Sci.* 13, 18–34. doi: 10.1177/07399863910131002
- Aslan, M. (2018). *The Investigation of the Relationship Between Anxiety Sensitivity and School Refusal on the Group of Students Aged 8-14 Years*. Master's Thesis, University of Otago, Dunedin.
- Balfanz, R., and Byrnes, V. (2012). The importance of being in school: a report on absenteeism in the nation's public schools. *Educ. Digest* 78:4.
- Bell, B. A., Kromrey, J. D., and Ferron, J. M. (2009). Missing data and complex samples: the impact of listwise deletion vs. subpopulation analysis on statistical bias and hypothesis test results when data are MCAR and MAR. *Proc. Joint Stat. Meet.* 26, 4759–4770.
- Benard, B. (1991). *Fostering Resiliency in Kids: Protective Factors in the Family, School, and Community*. San Francisco, CA: Far West Laboratory for Educational Research and Development.
- Blumkin, Z. K. (2016). The implementation of an evidence-based treatment for a complex case of school refusal. *Evid. Based Pract. Child Adolesc. Mental Health* 1, 16–23. doi: 10.1080/23794925.2016.1177800
- Bru, E., and Ertesvag, S. K. (2014). Parental perspectives of the role of school factors in school refusal. *Emot. Behav. Diffic.* 19, 131–153. doi: 10.1080/13632752.2013.816199
- Burrus, J., and Roberts, R. D. (2012). Dropping out of high school: prevalence, risk factors, and remediation strategies. *R D Connect.* 18, 1–9.
- Çakmak, S. Ş, and Ayvaşık, H. B. (2007). The relationship between drinking motives and anxiety sensitivity in university students. *Turk. J. Psychol.* 22, 91–113.
- Cassidy, S. (2016). The academic resilience scale (ARS-30): a new multidimensional construct measure. *Front. Psychol.* 7:1787. doi: 10.3389/fpsyg.2016.01787
- Chen, I. J., Wu, Y., and Wei, B. S. (2017). Effects of anxious emotions on the behavioral problems of Chinese children with learning difficulties. *Qual. Quant.* 51, 1147–1165. doi: 10.1007/s11135-016-0322-5
- Christopher, A. K., and Silverman, W. K. (1993). Measuring the function of school refusal behavior: the school refusal assessment scale. *J. Clin. Child Psychol.* 22, 85–96. doi: 10.1207/s15374424jccp2201_9
- Cox, B. J., Endler, N. S., Norton, G. R., and Swinson, R. P. (1991). Anxiety sensitivity and nonclinical panic attacks. *Behav. Res. Therapy* 29, 367–369. doi: 10.1016/0005-7967(91)90074-D doi: 10.1016/0005-7967(91)90074-d
- Crowe, L. M., Beauchamp, M. H., Catroppa, C., and Anderson, V. (2011). Social function assessment tools for children and adolescents: a systematic review from 1988 to 2010. *Clin. Psychol. Rev.* 5, 767–785. doi: 10.1016/j.cpr.2011.03.008
- Egger, H. L., Costello, J., and Angold, A. (2003). School refusal and psychiatric disorders: a community study. *J. Am. Acad. Child Adolesc. Psychiatry* 42, 797–807. doi: 10.1097/01.CHI.0000046865.56865.79
- Fernández-Zabala, A., Goñi, E., Camino, I., and Zulaika, L. M. (2016). Family and school context in school engagement. *Eur. J. Educ. Psychol.* 9, 47–55. doi: 10.1016/j.ejeps.2015.09.001
- Fornander, M. J., and Kearney, C. A. (2019). Family environment variables as predictors of school absenteeism severity at multiple levels: ensemble and classification and regression tree analysis. *Front. Psychol.* 10:2381. doi: 10.3389/fpsyg.2019.02381
- González, C., Inglés, C. J., Kearney, C. A., Sanmartín, R., Vicent, M., and García-Fernández, J. M. (2019a). Relationship between school refusal behavior and social functioning: a cluster analysis approach. *Eur. J. Educ. Psychol.* 12, 17–29. doi: 10.30552/ejep.v12i1.238
- González, C., Inglés, C. J., Martínez-Palau, A., Sanmartín, R., Vicent, M., and García-Fernández, J. M. (2019b). Child and adolescent social adaptive functioning scale: factorial invariance, latent mean differences, and *rt*s impact on school refusal behavior in spanish children. *Front. Psychol.* 10:1894. doi: 10.3389/fpsyg.2019.01894
- Graham, J. W. (2009). Missing data analysis: making it work in the real world. *Annu. Rev. Psychol.* 60, 549–576. doi: 10.1146/annurev.psych.58.110405.085530
- Grant, D. M., Beck, J. G., and Davila, J. (2007). Does anxiety sensitivity predict symptoms of panic, depression, and social anxiety? *Behav. Res. Therapy* 45, 2247–2255. doi: 10.1016/j.brat.2007.02.008
- Hansen, C., Sanders, S. L., Massaro, S., and Last, C. G. (1998). Predictors of severity of absenteeism in children with anxiety-based school refusal. *J. Clin. Child Psychol.* 27, 246–254. doi: 10.1207/s15374424jccp2703_2

- Havik, T., Bru, E., and Ertesvag, S. K. (2014). Parental perspectives of the role of school factors in school refusal. *Emot. Behav. Diffic.* 19, 131–153. doi: 10.1080/13632752.2013.816199
- Havik, T., Bru, E., and Ertesvag, S. K. (2015). School factors associated with school refusal and truancy related reasons for school non-attendance. *Soc. Psychol. Educ.* 18, 221–240. doi: 10.1007/s11218-015-9293-y
- Heyne, D., and King, N. J. (2004). "Treatment of school refusal," in *Handbook of Interventions That Work With Children and Adolescents: Prevention and Treatment*, eds P. M. Barrett, and T. H. Ollendick (West Sussex: John Wiley & Sons), 243–272.
- Heyne, D., Gren-Landell, M., Melvin, G., and Gentle-Genity, C. (2019). Differentiation between school attendance problems: why and how? *Cogn. Behav. Pract.* 26, 8–34. doi: 10.1016/j.cbpra.2018.03.006
- Heyne, D., King, N. J., Tonge, B. J., and Cooper, H. (2001). School refusal: epidemiology and management. *Paediatr. Drugs* 3, 719–732. doi: 10.2165/00128072-200103100-00002
- Heyne, D. A., Vreeke, L. J., Maric, M., Boelens, H., and Van-Widenfelt, B. M. (2017). Functional assessment of school attendance problems: an adapted version of the school refusal assessment scale-revised. *J. Emot. Behav. Disord.* 25, 178–192. doi: 10.1177/1063426616661701
- Hill, L. G., and Werner, N. E. (2006). Affiliative motivation, school attachment, and aggression in school. *Psychol. Sch.* 43, 231–246. doi: 10.1002/pits.20140
- Ingul, J. M., Klöckner, C. A., Silverman, W. K., and Nordahl, H. M. (2012). Adolescent school absenteeism: modelling social and individual risk factors. *Child Adolesc. Ment. Health* 17, 93–100. doi: 10.1111/j.1475-3588.2011.00615.x
- Ingul, J. M., and Nordahl, H. M. (2013). Anxiety as a risk factor for school absenteeism: what differentiates anxious school attenders from non-attenders? *Ann. Gen. Psychiatry* 12:25. doi: 10.1186/1744-859X-12-25
- Jaycox, L. H., and Repetti, R. L. (1993). Conflict in families and the psychological adjustment of preadolescent children. *J. Fam. Psychol.* 7, 344–355. doi: 10.1037/0893-3200.7.3.344
- Kandel, D. B., and Davies, M. (1982). Epidemiology of depressive mood in adolescents: an empirical study. *Arch. Gen. Psychiatry* 39, 1205–1212. doi: 10.1001/archpsyc.1982.04290100065011
- Kearney, C. A. (2002). Identifying the function of school refusal behavior: a revision of the school refusal assessment scale. *J. Psychopathol. Behav. Assess.* 24, 235–245. doi: 10.1023/A:1020774932043
- Kearney, C. A. (2008a). An interdisciplinary model of school absenteeism in youth to inform professional practice and public policy. *Educ. Psychol. Rev.* 20, 257–282. doi: 10.1007/s10648-008-9078-3
- Kearney, C. A. (2008b). School absenteeism and school refusal behavior in youth: a contemporary review. *Clin. Psychol. Rev.* 28, 451–471. doi: 10.1016/j.cpr.2007.07.012
- Kearney, C. A., and Albano, A. M. (2004). The functional profiles of school refusal behavior: diagnostic aspects. *Behav. Modific.* 28, 147–161. doi: 10.1177/0145445503259263
- Kearney, C. A., and Bates, M. (2005). Addressing school refusal behavior: suggestions for frontline professionals. *Child. Sch.* 27, 207–216. doi: 10.1093/cs/27.4.207
- Kearney, C. A., and Bensaheb, A. (2006). School absenteeism and school refusal behavior: a review and suggestions for school-based health professionals. *J. Sch. Health* 76, 3–7. doi: 10.1111/j.1746-1561.2006.00060.x
- Kearney, C. A., and Graczyk, P. (2014). A response to intervention model to promote school attendance and decrease school absenteeism. *Child Youth Care Forum* 43, 1–25. doi: 10.1007/s10566-013-9222-1
- Kearney, C. A., and Silverman, W. K. (1993). Measuring the function of school refusal behavior: the school refusal assessment scale. *J. Clin. Child Psychol.* 22, 85–96. doi: 10.1207/s15374424jccp2201_9
- King, N. J., and Bernstein, G. A. (2001). School refusal in children and adolescents: a review of the past 10 years. *J. Am. Acad. Child Adolesc. Psychiatry* 40, 197–205. doi: 10.1097/00004583-200102000-00014
- Knollmann, M., Knoll, S., Reissner, V., Metzelaars, J., and Hebebrand, J. (2010). School avoidance from the point of view of child and adolescent psychiatry: symptomatology, development, course, and treatment. *Deutsches Ärzteblatt Int.* 107, 43–49. doi: 10.3238/arztebl.2010.0043
- Lagana, M. T. (2004). Protective factors for inner-city adolescents at risk of school dropout: family factors and social support. *Child. Sch.* 26, 211–220. doi: 10.1093/cs/26.4.211
- Last, C. G., Hansen, C., and Franco, N. (1998). Cognitive-behavioral treatment of school phobia. *J. Am. Acad. Child Adolesc. Psychiatry* 37, 404–411. doi: 10.1097/00004583-199804000-00018
- Last, C. G., and Strauss, C. C. (1990). School refusal in anxiety-disordered children and adolescents. *J. Am. Acad. Child Adolesc. Psychiatry* 29, 31–35. doi: 10.1097/00004583-199001000-00006
- Luthar, S. S., Cicchetti, D., and Becker, B. (2000). The construct of resilience: a critical evaluation and guidelines for future work. *Child Dev.* 71, 543–562. doi: 10.1111/1467-8624.00164
- Mantar, A., Yemez, B., and Alkın, T. (2010). The validity and reliability of the Turkish version of the anxiety sensitivity Index-3. *Turk. J. Psychiatry* 21, 225–234.
- Mantar, A., Yemez, B., and Alkın, T. (2011). Anksiyete duyarlılığı ve psikiyatrik bozukluklardaki yeri. *Türk Psikiyatri Dergisi* 22, 187–193.
- Martin, A. J., and Marsh, H. W. (2006). Academic resilience and its psychological and educational correlates: a construct validity approach. *Psychol. Sch.* 43, 267–281. doi: 10.1002/pits.20149
- Masten, A. S., and Powell, J. L. (2003). "A resilience framework for research, policy, and practice," in *Resilience and vulnerability: Adaptation in the context of childhood adversities*, ed. S. S. Luthar (Cambridge, MA: Cambridge University Press), 1–25.
- Mazerolle, L., Eggins, E., Sydes, M., Hine, L., McEwan, J., Norrie, G., et al. (2018). *Criminal Justice Responses to Domestic and Family Violence: A Rapid Review of the Evaluation Literature*. Australia: University of Queensland.
- McHugh, R. K., and Otto, M. W. (2012). Profiles of distress intolerance in a substance-dependent sample. *Am. J. Drug Alcohol Abuse* 38, 161–165. doi: 10.3109/00952990.2011.643990
- McKee, M. T., and Caldarella, P. (2016). Middle school predictors of high school performance: a case study of dropout risk indicators. *Education* 136, 515–529.
- McNally, R. J. (2002). Anxiety sensitivity and panic disorder. *Biol. Psychiatry* 52, 938–946. doi: 10.1016/s0006-3223(02)01475-0
- McShane, G., Walter, G., and Rey, J. M. (2001). Characteristics of adolescents with school refusal. *Austral. New Zeal. J. Psychiatry* 35, 822–826. doi: 10.1046/j.1440-1614.2001.00955.x
- Otto, M. W., Eastman, A., Lo, S., Hearon, B. A., Bickel, W. K., Zvolensky, M., et al. (2016). Anxiety sensitivity and working memory capacity: risk factors and targets for health behavior promotion. *Clin. Psychol. Rev.* 49, 67–78. doi: 10.1016/j.cpr.2016.07.003
- Peguero, A. A., Popp, A. M., Latimore, T. L., Shekarkhar, Z., and Koo, D. J. (2011). Social control theory and school misbehavior: examining the role of race and ethnicity. *Youth Violence Juv. Justice* 9, 259–275. doi: 10.1177/1541204010389197
- Perez, W., Espinoza, R., Ramos, K., Coronado, H. M., and Cortes, R. (2009). Academic resilience among undocumented Latino students. *Hisp. J. Behav. Sci.* 31, 149–181. doi: 10.1177/0739986309333020
- Petersen, R. A., and Reiss, S. (1992). *Anxiety Sensitivity Index Manual*. Worthington, OH: International Diagnostic Systems.
- Price, C. S., Spence, S. H., Sheffield, J., and Donovan, C. (2002). The development and psychometric properties of a measure of social and adaptive functioning for children and adolescents. *J. Clin. Child Adolesc. Psychol.* 31, 111–122. doi: 10.1207/S15374424JCCP3101_13
- Reiss, S., and McNally, R. J. (1985). "Expectancy model of fear," in *Theoretical Issues in Behavior Therapy*, eds S. Reiss and R. R. Bootzin (San Diego, CA: Academic Press), 107–121.
- Richards, H. J., and Hadwin, J. A. (2011). An exploration of the relationship between trait anxiety and school attendance in young people. *Sch. Ment. Health* 3, 236–244. doi: 10.1007/s12310-011-9054-9
- Rocque, M., Jennings, W. G., Pquero, A. R., Ozkan, T., and Farrington, D. P. (2017). The importance of school attendance: findings from the Cambridge study in delinquent development on the life-course effects of truancy. *Crime Delinq.* 63, 592–612. doi: 10.1177/0011128716660520
- Rumberger, R. W. (2011). *Dropping Out: Why Student Drop Out of High School and What Can Be Done About It*. Cambridge, MA: Harvard University Press.
- Savi, F. (2011). School attachment scale for children and adolescents: the study of validity and reliability. *Element. Educ. Online* 10, 80–90.

- Schumacher, R. E., and Lomax, R. G. (2004). *A Beginner's Guide to Structural Equation Modeling*. Mahwah, New Jersey, NJ: Lawrence Erlbaum Associates.
- Seçer, Y. (2014a). Analysis of the relations between obsessive compulsive symptoms and anxiety sensitivity in adolescents with structural equation modeling. *Educ. Sci.* 39, 369–382. doi: 10.15390/EB.2014.3517
- Seçer, I. (2014b). The adaptation of school refusal assessment scale into Turkish: reliability and validity studies. *Pakistan J. Stat.* 30, 1197–1202.
- Seçer, İ. (2015). *The Analysis of the Relation Between School Burnout and Psychological Disorder of University Students*, Vol. 19. Erzurum: Atatürk University Journal of Social Sciences Institute, 81–99.
- Seçer, Y., and Gülbahçe, A. (2013). Adaptation of the anxiety sensitivity index for children to turkish: the study of validity and reliability. *Middle East. Afr. J. Educ. Res.* 3, 91–106.
- Silverman, W. K., Fleisig, W., Rabian, B., and Peterson, R. A. (1991). Childhood anxiety sensitivity index. *J. Clin. Child Adolesc. Psychol.* 20, 162–168. doi: 10.1207/s15374424jccp2002_7
- Şimşek, ÖF. (2007). *Yapısal Eşitlik Modellemesine Giriş; Temel İlkeler ve LISREL Uygulamaları*. Ankara: Ekinoks Yayıncılık.
- Tabachnick, B., and Fidell, L. (2013). *Using Multivariate Statistics*, 6th Edn. Boston: Pearson.
- Talwar, V., Lavoie, J., Gomez-Garibello, C., and Crossman, A. M. (2017). Influence of social factors on the relation between lie-telling and children's cognitive abilities. *J. Exp. Child Psychol.* 159, 185–198. doi: 10.1016/j.jecp.201.02.009
- Tanner-Smith, E. E., and Wilson, S. J. (2013). A meta-analysis of the effects of dropout prevention programs on school absenteeism. *Prevent. Sci.* 14, 468–478. doi: 10.1007/s11121-012-0330-1
- Ulaş, S., and Seçer, İ. (2020). *Adaptation of the Academic Resilience Scale to Turkish Culture: Reliability and Validity*. İstanbul: The Congress of VII Turkcess 2020.
- Vicent, M., Inglés, C. J., Sanmartín, R., González, C., Granados, L., and García-Fernández, J. M. (2017). Perfeccionismo socialmente prescrito y afectividad en población infantil española [Socially prescribed perfectionism and affect in Spanish children population]. *Eur. J. Investig. Health Psychol. Educ.* 7, 17–29. doi: 10.1989/ejihpe.v7i1.192
- Wang, M. C., Haertel, G. D., and Walberg, H. J. (1994). "Educational resilience in inner cities," in *Educational Resilience in Inner-City America: Challenges and Prospects*, eds M. C. Wang and E. W. Gordon (Hillsdale, NJ: Lawrence Erlbaum), 45–72.
- Wang, M. C., Haertel, G. D., and Walberg, H. J. (1997). *Fostering Educational Resilience in Inner-City Schools*. Philadelphia: National Research Center on Education, 119–140.
- Werner, E. E., and Smith, R. S. (1992). *Overcoming The Odds: High Risk Children from Birth to Adulthood*. Ithaca, NY: Cornell University Press.

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2020 Seçer and Ulaş. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



The Association Between Symptoms of Depression and School Absence in a Population-Based Study of Late Adolescents

Kristin G. Askeland^{1*}, Tormod Bøe^{1,2}, Astri J. Lundervold³, Kjell M. Stormark¹ and Mari Hysing^{1,2}

¹ Regional Centre for Child and Youth Mental Health and Child Welfare, NORCE Norwegian Research Centre, Bergen, Norway, ² Department of Psychosocial Science, Faculty of Psychology, University of Bergen, Bergen, Norway, ³ Department of Biological and Medical Psychology, Faculty of Psychology, University of Bergen, Bergen, Norway

OPEN ACCESS

Edited by:

Douglas F. Kauffman,
Medical University of the Americas –
Nevis, United States

Reviewed by:

Katie Finning,
University of Exeter, United Kingdom
Glenn Alexander Melvin,
Monash University, Australia

*Correspondence:

Kristin G. Askeland
kras@norce-research.no

Specialty section:

This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Psychology

Received: 18 December 2019

Accepted: 14 May 2020

Published: 09 June 2020

Citation:

Askeland KG, Bøe T,
Lundervold AJ, Stormark KM and
Hysing M (2020) The Association
Between Symptoms of Depression
and School Absence in a
Population-Based Study of Late
Adolescents.
Front. Psychol. 11:1268.
doi: 10.3389/fpsyg.2020.01268

Objective: School attendance is an important functional marker in adolescence, and knowledge of the correlates of school absence is important to inform preventive efforts. The main aim of the present study was to investigate the association between symptoms of depression and school absence in late adolescence, adjusting for sociodemographic characteristics and externalizing problems.

Methods: Data stem from the youth@hordaland-survey, a population-based survey of adolescents between 16 and 19 years old attending upper secondary education in Hordaland County, Norway, in spring 2012. Administrative data on school absence was provided for 8222 adolescents. In addition to days and hours absent the past semester, a variable of total absence was calculated and divided into quartiles of absence. Symptoms of mental health problems and sleep duration was based on adolescent self-reports.

Results: Reports of depressive symptoms were significantly associated with school absence when investigated as continuous variables. The strength of the association attenuated but remained statistically significant when controlling for sociodemographic factors and externalizing problems. When investigating the association at different levels of school absence, adolescents in the second, third and fourth quartile of school absence reported significantly higher depression scores compared to adolescents in the first quartile. The association between reports of symptoms of depression and school absence was partially mediated by sleep duration.

Conclusion: The association between reported symptoms of depression and school absence was evident even at low levels of school absence, indicating a role for universal prevention strategies. The findings suggest both depression and sleep problems as possible targets for intervention in late adolescence.

Keywords: school absence, adolescence, depression, sleep duration, mental health problems

INTRODUCTION

The importance of school attendance has been emphasized in several studies. These studies show that continued absence from school is associated with poorer academic achievement (Carroll, 2010; Attwood and Croll, 2014) and predicts early school leaving and later unemployment and health problems (Freudenberg and Ruglis, 2007; De Ridder et al., 2012). These major individual and societal consequences of school absenteeism, in combination with high absence rates across countries, has led to increased focus on the topic. To prevent poor academic achievement, regular school attendance is essential and every day of absence can have negative consequences (Hancock et al., 2013). Gaining a better understanding of the correlates of absenteeism is therefore important to enable early identification of students at risk of school disengagement (Ingul et al., 2012).

School absenteeism is a complex phenomenon that is related to a range of individual, family and school characteristics (Kearney, 2008; Ingul et al., 2012; Gubbels et al., 2019). Mental health problems is one individual factor that has been consistently associated with absence both in clinical and community samples (Mcshane et al., 2001; Egger et al., 2003; Jones et al., 2009; Ingul et al., 2012; Finning et al., 2019a; Lawrence et al., 2019). Depression is described as one of the most important public health challenges in adolescence (Green et al., 2005; Hyde et al., 2008; Salk et al., 2016) and as an important risk factor for school absence (Jones et al., 2009; Wood et al., 2012; Skedgell and Kearney, 2016; González et al., 2018; Nayak et al., 2018; Finning et al., 2019a). This association was confirmed in a recent meta-analysis (Finning et al., 2019b). Further, both mild and severe depression have been implicated as important targets for interventions to improve school attendance (Gase et al., 2014). Though previous studies indicate a possible association between depression and school absence, many have focused on severe mental health problems (Mcshane et al., 2001; Egger et al., 2003) or adolescents with severe absenteeism referred to treatment or sent to court for their absence problems (Berg et al., 1993; Skedgell and Kearney, 2018). Further, the amount of school absence is often defined as problematic or non-problematic according to cut-offs based on expert consensus (Heyne et al., 2018), and few studies have investigated the association with depression across the distribution of school absence (Skedgell and Kearney, 2016). In order to target universal preventions aimed at promoting regular attendance for all students, we need to know what predicts absence at lower levels (not only above 15% which is often used as a cut-off). Using the multi-tiered approach suggested by Kearney and Graczyk (2014), this refers to interventions at tier 1, aimed at students with less than 5% absence.

An important consideration when assessing the association between depression and school absence is the influence of other co-occurring mental health problems, such as externalizing problems. Externalizing problems have consistently been shown to be associated with school absence (Ingul et al., 2012; Vaughn et al., 2013; Gubbels et al., 2019), and a recent meta-analysis found larger effect sizes for the association between school absence and externalizing problems than depression (Gubbels et al., 2019).

Further, several studies have identified an overlap between internalizing and externalizing problems (Egger et al., 2003; Ingul et al., 2012), and this raises the question if co-occurring externalizing problems may account for the increase in absence related to depressive symptoms. The evidence base is conflicting. While one study found that co-occurring externalizing problems could account for the association (Ingul et al., 2012), there was still a significant association between depressive disorder and absence after controlling for externalizing problems in another study (Egger et al., 2003). Whether or not symptoms of depression are independently associated with school absence when controlling for externalizing problems will influence the choice of preventive efforts to reduce school absence and promote school attendance.

Furthermore, sleep problems should be taken into account (Finning et al., 2019b). Short sleep duration is not only frequent in adolescence (Hysing et al., 2013), it is both related to depression (Reigstad et al., 2010; van Zundert et al., 2015) and school attendance (Egger et al., 2003; Hysing et al., 2014) in this age group. A previous study based on the youth@hordaland found a significant association between sleep duration and school absence also when controlling for symptoms of depression (Hysing et al., 2014). It did not, however, investigate possible pathways. It is possible that sleep problems co-occur with mental health problems and school absence, but they may also be a pathway in which mental health problems manifest itself as school impairment.

Based on the above considerations, the main aim of the present study was to investigate the association between self-reported symptoms of depression and register-based school absence in a large population-based study in late adolescence. School absence will both be analyzed dimensionally as number of days and hours of absence, and as quartiles reflecting different levels of absence. Important covariates such as age, gender, parental education, economic well-being, and symptoms of externalizing problems will be adjusted for. If the association between symptoms of depression and school absence is significant, a possible indirect effect of sleep duration will be investigated.

MATERIALS AND METHODS

Procedure

In this population-based study, we used data from the youth@hordaland-survey of adolescents in the county of Hordaland in Western Norway. All adolescents born between 1993 and 1995 and all students attending upper secondary education during spring 2012 were invited to participate. In Norway, compulsory education ends at age 16, but adolescents between 16 and 19 years of age have a statutory right for upper secondary education. In 2012, 92% of all 16–18 year olds were registered in upper secondary education in Norway. The main aim of the survey was to assess prevalence of mental health problems and service use in adolescents.

Adolescents in upper secondary education received information via their school e-mail, and one classroom school hour was allocated for them to complete the questionnaire.

The questionnaire was web-based and covered a broad range of mental health issues, daily life functioning, use of health care and social services, demographics, as well as a request for permission to obtain school data, and to link the information with national health registries. The Regional Centre for Child and Youth Mental Health and Child Welfare collaborated with Hordaland County Council to conduct the study.

Sample

All adolescents born between 1993 and 1995 were invited ($N = 19,430$) to participate in the current study during the first months of 2012, of which 10,257 agreed, yielding a participation rate of 53%. Of these, 8988 adolescents consented to linkage to official school data provided by the Hordaland County Council and valid data on school absence was provided for 8222 adolescents.

Ethics

The study was approved by the Regional Committee for Medical and Health Research Ethics (REC) in Western Norway. In accordance with the regulations from the REC and Norwegian health authorities, adolescents aged 16 years and older can make decisions regarding their own health (including participation in health studies). The adolescents thus gave consent themselves to participate in the current study. Parents/guardians have the right to be informed, and all parents/guardians received written information about the study in advance.

Instruments

Demographic Information

Gender and date of birth was identified through the personal identity number in the Norwegian National Population Register. Exact age was estimated by calculating the interval of time between date of birth and date of participation. Socioeconomic status (SES) was assessed both by parental education and perceived economic well-being. Maternal and paternal education were reported separately with the response options: 'primary school,' 'secondary school,' 'college or university: less than 4 years,' 'college or university: 4 years or more' and 'don't know.' The two categories pertaining to college or university education were combined into one, regardless of the length of the education. Economic well-being was assessed by asking the adolescents how they perceived the economic well-being in their family compared to most others. Response alternatives were 'better than others,' 'equal to others,' and 'poorer than others.'

The educational programs reported by the adolescents were categorized into 'general studies' and 'vocational studies.' In the present study, only the adolescents with vocational subjects in a classroom setting were included in the latter category, excluding those in work placement where absence is not recorded by the schools. The categorization is based on the Norwegian upper secondary school system, which includes a program for general studies preparing for higher education and a vocational education program. Examples of vocational education tracks include Building and construction, Health care, childhood and youth development, and Information technology and media production.

School Attendance

Official register-based data on non-attendance were provided by Hordaland County Council and included separate variables for days and school-hours of absence from the last semester (6 months).

In addition to variables describing days and hours of school absence separately, *total school absence* was calculated by recoding hours of absence into days of absence based on the mandatory number of school hours each week in upper secondary school (an average of six school hours per day). Adding this new variable to the original variable of days of absence gave the definition of total absence. Total school absence was split into quartiles to investigate associations at different levels of absence.

Depressive Symptoms

Symptoms of depression were assessed using the short version of the Mood and Feelings Questionnaire (SMFQ). The SMFQ comprises 13 items assessing depressive symptoms rated on a three-point Likert scale. The wording of the response categories in the Norwegian translation equals the original categories of 'not true,' 'sometimes true,' and 'true.' High internal consistency between the items and a strong uni-dimensionality have been shown in population-based studies (Sharp et al., 2006), and confirmed by a study including a sample from the youth@hordaland (Lundervold et al., 2013). The standardized total SMFQ score (z-transformed) was used to indicate severity of depressive symptoms in the present study.

ADHD Symptoms

Symptoms of inattention and hyperactivity were assessed using the official Norwegian translation of the Adult ADHD Self-report Scale (ASRS) (Kessler et al., 2005). The questionnaire was originally constructed for use in adults, but has been validated for use among adolescents (Adler et al., 2012). ASRS is an 18 item self-report scale rated on a five-point Likert scale, comprising nine items assessing hyperactivity-impulsivity and nine items assessing inattention. The standardized total score across all 18 items was used to define severity of ADHD symptoms in the present study.

Symptoms of Conduct Problems

Symptoms of conduct problems were assessed using the Youth Conduct Disorder (YCD) scale (Lucas et al., 2001). The YCD consists of eight items with the response option 'yes' or 'no,' and the total number of 'yes' responses gives a measure of the severity of symptoms of conduct problems. It is part of the Diagnostic Interview Schedule for Children Predictive Scales (DPS), which has been shown to accurately identify adolescents with a high probability of meeting diagnostic criteria for conduct disorder (Lucas et al., 2001).

Sleep Duration

Self-reported bedtime and rise time were indicated in hours and minutes using a scroll down menu with 5 min intervals and were reported separately for weekdays and weekend. Time in bed (TIB) was calculated by subtracting bedtime from rise time. Sleep onset latency (SOL) and wake after sleep onset (WASO) were indicated

in hours and minutes using an equal scroll down menu. Sleep duration was defined as TIB minus SOL and WASO.

Statistical Analyses

To enable comparison across instruments, sum scores on the SMFQ, the ASRS and the YCD were standardized (z -transformed), with a mean of 0 and a standard deviation (SD) of 1. New categorical variables were created where the scores on each instrument were dichotomized at the 90th percentile, indicating the adolescents with the 10% highest scores. The 90th percentile was chosen as it is a well-established cut-off for dichotomizing between children and adolescents with and without risk of mental health problems (Goodman, 2001), and there are no official cut-off scores available for all the measures used in the present study. With regards to the SMFQ, a cut-off at 12 was suggested in a study of help-seeking adolescents aged 12–19 (Thabrew et al., 2018), while a previous study of Norwegian adolescents aged 10–19 used a cut-off at 11 (Larsson et al., 2016). The cut-off in the latter study corresponded roughly to the 90th percentile (Larsson et al., 2016). In the present study, the 90th percentile corresponds to a cut-off at 15, which is higher than in the previous studies. As the youth@hordaland is limited to late adolescence, higher scores is to be expected, in accordance with the findings of Larsson et al. (2016). Using the 90th percentile as a cut-off could be more inclusive than relying on the prevalence of mental disorders among Norwegian adolescents. We therefore conducted sensitivity analyses based on the 95th percentile, which yielded similar results to those relying on the 90th percentile.

Based on the scores dichotomized at the 90th percentile, we further created categorical variables identifying the adolescents scoring above the 90th percentile on (1) the SMFQ only, (2) one or both of the measures of externalizing problems (ASRS and YCD, but not the SMFQ) and (3) on both the SMFQ and one or both of the measures of externalizing problems (ASRS and YCD). Sensitivity analyses were conducted where the adolescents who scored above the 90th percentile on both the ASRS and the YCD were removed, which only led to small alternations in the numbers and did not affect the results notably.

Mean differences in absence according to gender and school program were investigated using independent samples t -tests. Due to the small number of participants who were 19 years old at the time of the survey ($n = 221$), 18- and 19-year-olds were allocated to the same age group. The effect sizes of the differences were calculated using the Cohen's d formula and interpreted according to convention with d 's of about 0.2 representing small effect sizes, d 's of about 0.5 representing medium effect sizes and d 's of 0.8 and higher indicating large effect sizes (Cohen, 1988). Mean differences in absence according to age were investigated using analysis of variance (ANOVA), with eta-squared as a measure of effect size. Eta-squared describes the proportion of the total variation in the dependent variable that can be attributed to the independent variable (Fritz et al., 2012).

Due to excess zero-observations and over dispersion of the two outcome variables days and hours of absence, zero-inflated negative binomial (ZINB) regression was used to investigate the relationship between symptoms of depression and school absence. The ZINB regression analysis creates two separate

models; a logit model for the zero-inflated part, predicting the likelihood of being a certain zero and the negative binomial model (count) that predicts the counts for participants who are not certain zeros. The two models are then combined. Average marginal effects (AMEs) were calculated to examine the expected increase in school absence following an increase of 1 SD in the independent variables in the negative binomial part of the model. In the zero-inflated part of the model, age, gender, parental education, and perceived economic well-being were included as predictors of having no absence. Odds ratios of the associations were calculated.

Multinomial logistic regression was used to investigate the association between symptoms of depression and quartiles of school absence. The quartiles of school absence were included as the independent variable and the first quartile, corresponding to the adolescents with the 25% lowest absence, was set as the reference group.

Three models were specified for the ZINB regression and multinomial logistic regression analyses. In the first two models, separate analyses were conducted with symptoms of depression, the total ASRS and YCD scores as independent variables. The associations with school absence were adjusted for age, gender, parental education, and perceived economic well-being in model 1. Preliminary analyses of age and gender as potential moderators of the association showed non-significant interactions, and they were therefore included as control variables in the analyses. In model 2, symptoms of depression, ADHD, and conduct problems were entered concurrently in the analysis, indicating their individual contributions.

The association between symptoms of depression and school absence was further examined by estimating a structural equation model allowing for mediation by sleep duration. The analysis was controlled for age, gender, parental education and perceived economic well-being, symptoms of ADHD and conduct problems. The robust maximum likelihood estimator was used, and missing data was handled by full information maximum likelihood (FIML). Indirect effects were investigated using the built-in function IND in Mplus. A significant mediation effect was determined using 95% bias-corrected bootstrap confidence interval. The standardized effect sizes are reported.

The independent samples t -test, ANOVA, ZINB regression, and multinomial logistic regression were conducted using STATA 15 (StataCorp, 2017). Mplus (version 8) (Muthén and Muthén, 1998–2017) was used for the mediation analysis.

RESULTS

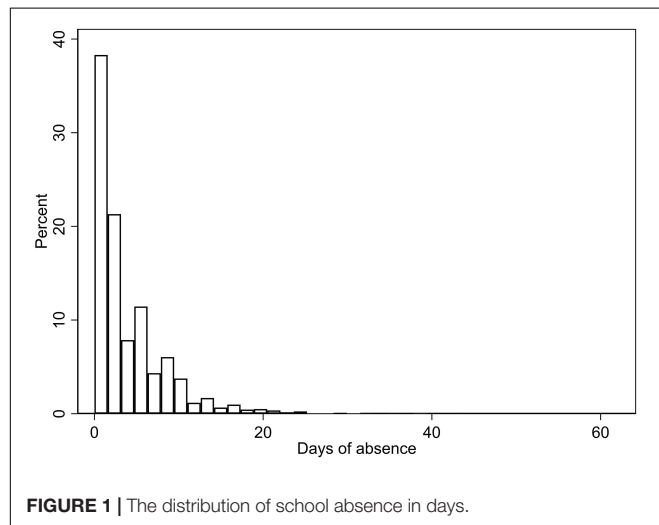
Sample Characteristics

The sample consisted of 8222 adolescents, 51.6% girls (see **Table 1**). The age of the participants ranged from 16 to 19 years and the mean age was 16.94 years ($SD = 0.84$ years). The most commonly reported education level was college/university for mothers (35.5%) and secondary school for fathers (34.6%). The majority of adolescents reported their economic well-being to be equal to others (65.7%), and few reported to be poorer than others (7.0%).

TABLE 1 | Demographic characteristics of the sample.

	<i>n</i>	%	Range	% missing
Gender				
Female	4243	51.6		
Age [m(SD)]	16.94	0.84	16–19	0.1
Parental education				
Maternal education				1.45
Primary school	652	7.9		
Secondary school	2576	31.3		
College/university	2905	35.3		
Don't know	1970	24.0		
Paternal education				1.68
Primary school	674	8.2		
Secondary school	2843	34.6		
College/university	2498	30.4		
Don't know	2069	25.1		
Perceived economic well-being				2.69
Better than others	2029	24.7		
Equal to others	5399	65.7		
Poorer than others	573	7.0		
Symptoms of mental health problems				
Depression [m(SD)]	5.77	5.75	0–26	4.09
ADHD [m(SD)]	26.77	10.58	0–72	4.65
Conduct problems [m(SD)]	0.40	1.01	0–8	8.06

m, mean; *SD*, standard deviation.

**FIGURE 1 |** The distribution of school absence in days.

The Distribution of School Absence in the Sample

The distribution of school absence measured in days is shown in **Figure 1**, with a similar distribution for hours of absence. As detailed in **Table 2**, girls had a significantly higher number of days ($p < 0.001$, $d = 0.20$) and hours ($p < 0.001$, $d = 0.11$) absent than boys. Further, older adolescents had significantly higher absence compared to younger adolescents ($p < 0.001$, $\eta^2 = 0.03$ for both days and hours of absence). Regarding school programs, there was a significant difference between adolescents attending

general studies and vocational studies regarding days ($p = 0.005$, $d = 0.07$), but not hours ($p = 0.864$) of absence, with the highest school absence among adolescents attending vocational studies.

The Association Between Severity of Depressive Symptoms and School Absence

Results from the negative binomial part of the ZINB regression analysis showed a positive association between the total SMFQ score and days of school absence (see **Table 3**). Specifically, an increase of one standard deviation in the SMFQ score was associated with an increase in absence of 0.57 days ($p < 0.001$) when adjusting for demographic and socioeconomic variables. The associated increase in absence attenuated to 0.40 days ($p < 0.001$) when the ADHD and conduct problems symptom scores were included as covariates (model 2). Similar results were found for hours of absence, with an average marginal effect of 0.74 h of absence ($p < 0.001$) when adjusted for sociodemographic variables and 0.39 h ($p = 0.004$) when also adjusted for the ADHD and conduct problems symptom scores.

Results from the zero-inflated part of the model, predicting the likelihood of being a certain zero, were similar in all the analyses. Results from the fully adjusted model investigating associations with days of absence are presented. Older adolescents were less likely to have no absence compared to younger adolescents ($OR = 0.67$, 95% CI 0.50–0.91, $p = 0.010$), and girls were less likely to have no absence compared to boys ($OR = 0.22$, 95% CI 0.07–0.65, $p = 0.006$). Neither maternal education, paternal education nor perceived economic well-being were significantly related to the odds of having no absence (results not shown).

To investigate school attendance among adolescents with high scores on the SMFQ, the analyses were rerun using the dichotomous variables used to define high scorers on depression, ADHD symptoms and conduct problems. Adolescents scoring above the 90th percentile were compared to those with lower scores on the respective instruments. Results were similar to the analyses using the continuous scores, but the expected increases of absence both measured as days and hours were somewhat larger (see **Table 4**). In the fully adjusted model, scoring in the 90th percentile of depressive symptoms was related to an expected increase in absence by 1.09 days ($p < 0.001$). The corresponding increase in hours of absence was 1.28 h ($p = 0.006$).

The Association Between Depression and Different Levels of School Absence

The associations between symptoms of depression and different levels of school absence were investigated by dividing the total absence into quartiles. The distribution of absence in quartiles is shown in **Table 5**.

Compared to adolescents in the first quartile, i.e., with the 25% lowest absence, adolescents in the other quartiles had a higher relative risk for a higher SMFQ score in model 1 (see **Table 6**). There was a tendency of higher risk ratios in the higher quartiles, for instance, in model 1, there was a RRR of 1.11 (95% CI 1.03–1.20) in quartile 2 and a RRR of 1.41 (95% CI 1.33–1.51)

TABLE 2 | School absence during one semester (84 school days) and demographic characteristics.

	Days of absence			Hours of absence		
	Mean (SD)	p-Value	Effect size	Mean (SD)	p-Value	Effect size
Gender		<0.001	$d = 0.20$		<0.001	$d = 0.11$
Boys	3.52 (4.76)			4.63 (8.65)		
Girls	4.54 (5.28)			5.66 (9.63)		
Age		<0.001	$\eta^2 = 0.03$		<0.001	$\eta^2 = 0.03$
16 ($n = 2984$)	3.40 (4.55)			4.00 (7.85)		
17 ($n = 2991$)	3.82 (4.69)			4.46 (8.22)		
18–19 ($n = 2238$)	5.22 (5.92)			7.89 (11.50)		
School program		0.005	$d = 0.07$		0.864	$d = 0.006$
General studies	3.86 (4.50)			4.98 (8.81)		
Vocational studies	4.19 (5.46)			5.03 (9.25)		

SD, standard deviation; d , Cohen's d ; η^2 : eta-squared. Effect size for t -test: Cohen's d , for ANOVA: eta-squared.

TABLE 3 | The association between symptoms of depression and school absence in days and hours.

	Model 1				Model 2			
	Coef.	SE	p-Value	AME	Coef.	SE	p-Value	AME
Days of absence								
Depression	0.14	0.01	<0.001	0.57	0.10	0.02	<0.001	0.40
ADHD	0.14	0.01	<0.001	0.58	0.09	0.02	<0.001	0.38
Conduct problems	0.11	0.01	<0.001	0.46	0.08	0.01	<0.001	0.32
Age					0.20	0.02	<0.001	0.88
Gender					0.12	0.04	0.001	0.76
Hours of absence								
Depression	0.15	0.03	<0.001	0.74	0.08	0.03	0.004	0.39
ADHD	0.20	0.03	<0.001	0.99	0.15	0.03	<0.001	0.73
Conduct problems	0.16	0.03	<0.001	0.77	0.11	0.03	<0.001	0.51
Age					0.23	0.03	<0.001	1.97
Gender					0.05	0.06	0.423	0.61

Coef., coefficient; SE, standard error; AME, average marginal effect. Model 1: adjusted for age, gender, parental education and economic well-being, Model 2: symptoms of depression, ADHD and conduct problems are entered concurrently and adjusted for the same covariates as in model 1. For gender, boy is set as reference.

TABLE 4 | The association between high symptom scores of depression (90th percentile) and school absence in days and hours.

	Model 1				Model 2			
	Coef.	SE	p-Value	AME	Coef.	SE	p-Value	AME
Days of absence								
Depression	0.30	0.05	<0.001	1.38	0.25	0.05	<0.001	1.09
ADHD	0.34	0.04	<0.001	1.57	0.28	0.05	<0.001	1.26
Conduct problems	0.35	0.05	<0.001	1.61	0.27	0.05	<0.001	1.21
Age					0.20	0.02	<0.001	0.89
Gender					0.18	0.03	<0.001	0.97
Hours of absence								
Depression	0.31	0.08	<0.001	1.74	0.24	0.09	0.006	1.28
ADHD	0.45	0.08	<0.001	2.75	0.34	0.09	<0.001	1.93
Conduct problems	0.47	0.09	<0.001	2.83	0.38	0.09	<0.001	2.20
Age					0.24	0.03	<0.001	2.04
Gender					0.11	0.06	0.054	0.93

Coef., coefficient; SE, standard error; AME, average marginal effect. Model 1: adjusted for age, gender, parental education and economic well-being, Model 2: symptoms of depression, ADHD and conduct problems are entered concurrently and adjusted for the same covariates as in model 1. For gender, boy is set as reference.

TABLE 5 | The distribution of total school absence in quartiles.

	N	Mean	SD	Min	Max	% absent
1st quartile	2827	0.39	0.47	0	1	0.5
2nd quartile	1740	2.34	0.54	1.17	3	2.8
3rd quartile	1670	4.74	0.84	3.17	6	5.6
4th quartile	1985	11.78	6.38	6.17	63	14.0

SD, standard deviation. The column % absent includes the percent of the total number of school days in the semester the mean absence refers to.

in quartile 4 compared to quartile 1. The relative risk ratios of higher depression scores were slightly attenuated, but remained significant at all quartiles when the symptoms of ADHD and conduct problems were included in the analysis in model 2.

The Association Between School Absence and High Scores on Either Depression, Externalizing Problems, or Both

To further investigate the importance of symptoms of depression relative to externalizing problems for school absence, associations were investigated for adolescents scoring above the 90th percentile of the SMFQ only, adolescents scoring above the 90th percentile on measures of externalizing problems (ASRS or YCD) only and adolescents who scored above the 90th percentile on both the measures of depression and externalizing problems (see **Table 7**). Compared to adolescents with absence in the first quartile, adolescents in the higher quartiles had significantly higher relative risk of scoring above the 90th percentile on only depression and only externalizing problems. Regarding high scores on both depression and externalizing problems, significant differences were only found for the third and fourth quartile.

Sleep Duration as a Mediator

A mediation analysis was conducted to explore the effect of sleep duration on the association between symptoms of depression

and school absence. As shown in **Figure 2**, the association was partially mediated by sleep duration, with a significant direct effect from symptoms of depression to school absence, as well as an indirect effect through shorter sleep duration with an increasing sum score on the symptom scale of depression.

DISCUSSION

In the present population-based study, depressive symptoms were significantly associated with number of days and hours of school absence among adolescents in upper secondary education in Norway. The association was attenuated by the presence of externalizing problems, but the depression score remained an independent predictor of school attendance. There was a trend toward stronger associations in the subgroup with high scores on the depression scale (scoring above the 90th percentile). When investigating different levels of school absence, adolescents with absence in the second, third and fourth quartiles has a significantly higher risk of more severe symptoms of depression. The association between severity of depressive symptoms and school absence was partially mediated by sleep duration.

The positive association between the total score on the depression scale and school absence is in line with previous studies and a recent meta-analysis (Egger et al., 2003; Jones et al., 2009; Wood et al., 2012; Skedgell and Kearney, 2016; Nayak et al., 2018; Finning et al., 2019a,b; Lawrence et al., 2019). The associations attenuated, but remained significant after adjusting for severity level of symptoms of externalizing problems, in line with previous research based on diagnosed disorders (Egger et al., 2003). However, it is in contrast to a previous study of Norwegian adolescents, where internalizing problems were no longer significantly associated with absence when accounting for externalizing problems (Ingul et al., 2012). This may be explained by differences in methodology and the inclusion of anxiety in addition to depression in the measure of internalizing problems in the previous Norwegian study (Ingul et al., 2012).

TABLE 6 | The association between symptoms of depression and different levels of school absence (divided into quartiles).

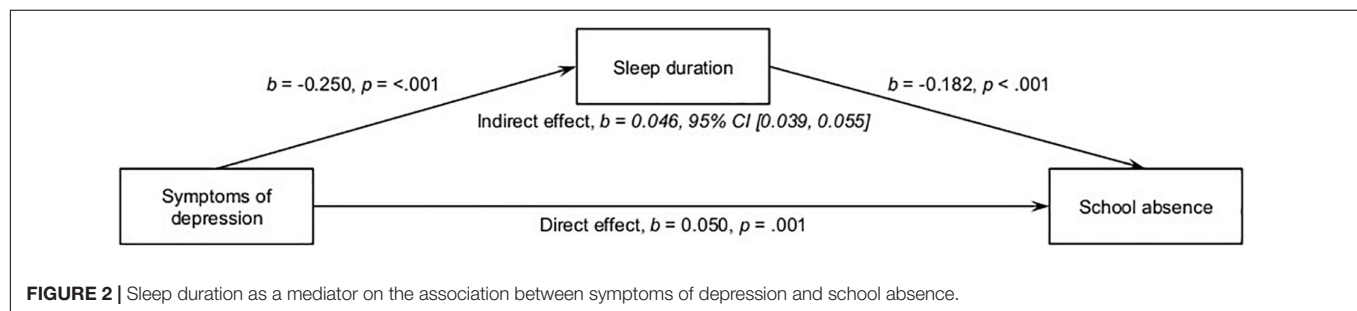
	2nd quartile		3rd quartile		4th quartile	
	RRR (95% CI)	p-Value	RRR (95% CI)	p-Value	RRR (95% CI)	p-Value
<i>Model 1</i>						
Depression	1.11 (1.03–1.20)	0.004	1.22 (1.14–1.31)	<0.001	1.41 (1.33–1.51)	<0.001
ADHD	1.07 (1.00–1.14)	0.044	1.21 (1.13–1.29)	<0.001	1.46 (1.37–1.55)	<0.001
Conduct problems	1.13 (1.05–1.22)	0.001	1.21 (1.12–1.30)	<0.001	1.37 (1.28–1.47)	<0.001
<i>Model 2</i>						
Depression	1.09 (1.01–1.19)	0.028	1.13 (1.04–1.23)	0.003	1.24 (1.15–1.34)	<0.001
ADHD	1.03 (0.95–1.11)	0.509	1.12 (1.03–1.21)	0.006	1.30 (1.20–1.40)	<0.001
Conduct problems	1.10 (1.02–1.19)	0.019	1.16 (1.07–1.25)	<0.001	1.26 (1.18–1.36)	<0.001
Age	1.23 (1.13–1.34)	<0.001	1.43 (1.31–1.55)	<0.001	1.74 (1.60–1.89)	<0.001
Gender	1.23 (1.07–1.41)	0.001	1.38 (1.20–1.59)	<0.001	1.72 (1.49–1.98)	<0.001

RRR, relative risk ratio. School absence divided into quartiles, with the 1st quartile as the reference group. Model 1: adjusted for age, gender, and parental education, Model 2: symptoms of depression, ADHD, and conduct problems are entered concurrently and adjusted for the same covariates as in model 1. For gender, boy is set as reference.

TABLE 7 | The association between school absence (divided into quartiles) and high scores on either depression, externalizing problems, or both.

	2nd quartile		3rd quartile		4th quartile	
	RRR (95% CI)	p-Value	RRR (95% CI)	p-Value	RRR (95% CI)	p-Value
Depression	1.42 (1.05–1.92)	0.024	1.46 (1.08–1.98)	0.015	2.28 (1.73–2.99)	<0.001
Externalizing problems	1.47 (1.19–1.82)	<0.001	1.64 (1.32–2.03)	<0.001	2.64 (2.17–3.21)	<0.001
Both	1.09 (0.72–1.65)	0.798	1.73 (1.19–2.52)	0.004	3.08 (2.21–4.28)	<0.001
Age	1.22 (1.13–1.32)	<0.001	1.41 (1.30–1.53)	<0.001	1.72 (1.59–1.86)	<0.001
Gender	1.27 (1.12–1.44)	<0.001	1.44 (1.26–1.64)	<0.001	1.85 (1.62–2.10)	<0.001

RRR, relative risk ratio. School absence divided into quartiles, with the 1st quartile as the reference group. Here, depression refers to adolescents scoring above the 90th percentile on the SMFQ only, externalizing problems refers to adolescents scoring above the 90th percentile on the ASRS, the YCD or both, and both refers to adolescents scoring above the 90th percentile on both the SMFQ and one of the measures of externalizing problems. For gender, boy is set as reference.



In the study investigating diagnosed disorders, many of the internalizing disorders were no longer significantly associated with absence when controlled for comorbidity, only separation anxiety and depression predicted absence independently (Egger et al., 2003). Previous studies have found that associations with absence are stronger for symptoms of depression than anxiety (Jones et al., 2009; Finning et al., 2019a), and many adolescents with symptoms of anxiety continue to attend school on a regular basis (Ingul and Nordahl, 2013). It has been suggested that it could be more difficult for adolescents suffering from depressive symptoms to attend school regularly (Finning et al., 2019a), probably due to the specific symptoms of depression. It is likely that lack of energy, loss of motivation and difficulties concentrating could influence schoolwork and results. This could in turn lead to low self-esteem and feelings of hopelessness, increasing the likelihood that the adolescent does not attend school. Depression has been related to work-life participation among adults, especially among younger adults (Mykletun et al., 2006), and the symptoms showing the strongest association with work impairment include sad mood, problems concentrating, energy loss and sleep onset insomnia (Fried and Nesse, 2014).

The adolescents with the highest absence rates had the strongest association with symptoms of depression. This is in line with previous studies where high absence, defined as absence above 15% of school days, is related to an increase in internalizing problems that is not seen at lower levels of absence (Ingul et al., 2012; Skedgell and Kearney, 2016). Further, in a large study from the United States, adolescents who were classified as high level school skippers (above 13%) were more likely to report a history of depression, while no such association was found for adolescents with moderate absence (1–3 days) (Vaughn et al., 2013). Still, the present study detects significant differences

in symptoms of depression between adolescents in the first and second quartile, groups with a mean absence of 0.5 and 2.8%, respectively. Thus, the present findings suggest that the associations are present also at lower levels of absence, supporting the notion that every day counts, also in the context of mental health problems.

Of note, the participants with school absence in the second quartile did not have a higher risk of having high scores on both depression and externalizing problems. Thus, co-existence of the two did not emerge as an important factor for those with a moderate level of school absence. A possible explanation is that while comorbid mental health problems is not an early warning sign of school absence, high scores on either symptoms of depression or externalizing problems are.

Interestingly, the association between reports of depressive symptoms and school absence was partially mediated by sleep duration. Absence has previously been associated with short sleep duration (Hysing et al., 2014) and sleep problems (Egger et al., 2003), but this is the first study to investigate the mediating role of sleep duration on the well-established association between symptoms of depression and school absence in a population-based sample. It appears that sleep duration could be one of the mechanisms by which depressive symptoms negatively influences school absence. A longer sleep onset latency that drives the short sleep duration in this age group is also a key characteristic of adolescents with depressive symptoms (Sivertsen et al., 2014) and may be closely related to ruminations at bedtime (Slavish and Graham-Engeland, 2015). Short sleep duration impairs coping with stressful situations in adolescence, thus shorter sleep related to depressive symptoms may impede coping with everyday school life and attendance (Wang and Yip, 2019).

Girls had significantly higher absence than boys both in days and hours, and older adolescents had higher absence than younger adolescents, which is consistent with previous research (Hancock et al., 2013; Maynard et al., 2017; Gubbels et al., 2019). We also know that both sleep duration and depressive symptoms are age and gender specific (Hysing et al., 2013; Lundervold et al., 2013; Maslowsky and Ozer, 2014). Still, there was no evidence of moderation, i.e., that the association differed between boys and girls and the different age groups. The finding regarding gender is in line with a recent meta-analysis (Gubbels et al., 2019) and a study of United Kingdom children (Finning et al., 2019a). In contrast to the present study, the latter study identified a significant moderating effect of age indicating a stronger association between depression and school absence for adolescents compared to children (Finning et al., 2019a). This is likely due to the different age compositions, where the previous study compared results in 5- to 11-year-old children to results in 11- to 16-year-old adolescents. As the age range is narrower in the present study, focusing solely on late adolescence, it appears that the associations remain stable in late adolescence.

Strengths and Limitations

This is one of the first studies to investigate associations between symptoms of depression and absence both dimensionally and at different levels of absence in a large population-based survey. Strengths of the study include the large sample size and the use of an official registry of school absence. It is to the best of our knowledge the first study including sleep duration as a mediator on the association between depression and school absence.

A central limitation of the study is its cross-sectional nature, making it impossible to specify the direction of the associations. This is a challenge in the mediation analysis, and the results must therefore be interpreted with caution. In the mediation model, we assume that symptoms of depression precede school absence. This is based on previous longitudinal investigations which suggest that depression precedes school absence, especially in adolescence (Wood et al., 2012; Burton et al., 2014).

We were further not able to distinguish between different types of absence based on form or function in the present study (Heyne et al., 2018). A recent meta-analysis indicated that the association between depression and school absence differed according to the type of absence (Finning et al., 2019b), and it is thus possible that we would have more nuanced findings if such information was available. Furthermore, we were only able to include risk factors related to the adolescent in the present study, and do not have information on factors related to the family, school or peer group that could be important in understanding school absence (Kearney, 2008; Gubbels et al., 2019).

It is important to note that the diagnostic criteria for depression, ADHD and conduct problems were not included in the present study and scoring above the 90th percentile does not indicate fulfilling the diagnostic criteria for the respective mental disorders.

The response rate of the survey was only 53%, which limits the generalizability of the results. It is possible that adolescents experiencing more mental health problems were less likely to

answer the questionnaire. Further, as the youth@hordaland-survey was school-based, it is likely that the majority of the participants completed the questionnaire during the allocated classes at school even though they could complete the questionnaire at their own convenience during the data collection period. Thus, adolescents without attendance problems were more likely to participate in the survey. Still, though no national statistics of absence rates are available for comparison, comparing the GPA in the sample to national statistics indicate that the sample is representative of adolescents attending school in terms of academic functioning (Hysing et al., 2016). Though the low response rate could bias the prevalence estimates of both mental health problems and school absence in the present study, it has been suggested that measures of associations are less affected by selective participation (Wolke et al., 2009).

Implications

The present findings support the notion that every day of absence counts, also for mental health problems. Though this is increasingly recognized, and early intervention is emphasized, there is currently no consensus as to how much absence is too much absence and when to intervene (Chu et al., 2019; Ingul et al., 2019). In the present study, the association between severity of depressive symptoms and school absence was evident even at low levels of absence. This is important information for teachers and health personnel working with adolescents and suggest a role for universal prevention in schools. Universal prevention strategies are aimed at the entire population and aim to reduce a risk factor by a small amount for everyone, rather than restricting the strategies to those at high risk for mental health problems (Gordon, 1983; O'Connell et al., 2009). Since the present study reports mental health problems even at low levels of absence, a small reduction in mental health problems in the general adolescent population could contribute to reduce absence and related negative consequences. School based programs to prevent depression in adolescence have yielded a reduction in depression with small effect sizes (Werner-Seidler et al., 2017). It is possible that such a small reduction, if it concerns many adolescents, could significantly reduce absence. As we cannot know the direction of the associations based on the present cross-sectional data, it is further possible that increasing school attendance among adolescents could impact their mental health favorably in a similar manner. Still, the possibility of universal prevention and early interventions focused on emerging depression, sleep problems and school absence remain as speculations in the present study, and future research is needed to develop and validate intervention strategies. Indeed, the lack of studies focusing on evidence based prevention and early intervention strategies is identified as a gap in the current literature (Tonge and Silverman, 2019).

In addition to informing prevention strategies, the present study points to some early risk indicators that could be included in early assessments of students showing signs of emerging school absenteeism. The independent association of depression on school absence after accounting for externalizing problems, and the role of short sleep duration as a mediator suggests that measures to prevent school absence focused at the individual

level could include both these problem areas. While symptoms of emotional distress are often included in such evaluations, sleep problems could be a valuable addition.

The results further point to several interesting avenues for future research. Firstly, the importance of sleep problems in school attendance merit further investigation and including absence as an outcome measure should be considered in intervention programs. Secondly, although the present study suggests associations between symptoms of depression and emerging school absence, longitudinal analyses are needed to further investigate their timing and order.

CONCLUSION

The present study confirms that the association between symptoms of depression and school absence is found even at lower levels of absence in a population-based sample. The inclusion of sleep duration as a mediator is a valuable contribution to the literature, and our results indicate that short sleep duration could be one of the mechanisms linking symptoms of depression to school absence in adolescence.

DATA AVAILABILITY STATEMENT

The datasets for this manuscript are not publicly available due to privacy restrictions in accordance with the ethical approval for the youth@hordaland-survey. Requests to access the datasets should be directed to the Bergen Child Study group, bib@norcereasearch.no.

REFERENCES

- Adler, L. A., Shaw, D. M., Spencer, T. J., Newcorn, J. H., Hammer, P., Sitt, D. J., et al. (2012). Preliminary examination of the reliability and concurrent validity of the attention-deficit/hyperactivity disorder self-report scale v1.1 symptom checklist to rate symptoms of attention-deficit/hyperactivity disorder in adolescents. *J. Child. Adolesc. Psychopharmacol.* 22, 238–244. doi: 10.1089/cap.2011.0062
- Attwood, G., and Croll, P. (2014). Truancy and well-being among secondary school pupils in England. *Educ. Stud.* 41, 14–28. doi: 10.1080/03055698.2014.955725
- Berg, I., Butler, A., Franklin, J., Hayes, H., Lucas, C., and Sims, R. (1993). DSM-III-R disorders, social factors and management of school attendance problems in the normal population. *J. Child Psychol. Psychiatry* 34, 1187–1203. doi: 10.1111/j.1469-7610.1993.tb01782.x
- Burton, C. M., Marshal, M. P., and Chisolm, D. J. (2014). School absenteeism and mental health among sexual minority youth and heterosexual youth. *J. Sch. Psychol.* 52, 37–47. doi: 10.1016/j.jsp.2013.12.001
- Carroll, H. C. M. (2010). The effect of pupil absenteeism on literacy and numeracy in the primary school. *Sch. Psychol. Int.* 31, 115–130. doi: 10.1177/0143034310361674
- Chu, B. C., Guarino, D., Mele, C., O'Connell, J., and Coto, P. (2019). Developing an online early detection system for school attendance problems: results from a research-community partnership. *Cogn. Behav. Pract.* 26, 35–45. doi: 10.1016/j.cbpra.2018.09.001
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*, 2nd Edn. Hillsdale, NJ: Erlbaum.
- De Ridder, K. A., Pape, K., Johnsen, R., Westin, S., Holmen, T. L., and Bjørngaard, J. H. (2012). School dropout: a major public health challenge: a 10-year prospective study on medical and non-medical social insurance benefits in

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Regional Committee for Medical and Health Research Ethics (REC) in Western Norway. Written informed consent from the participants' legal guardian/next of kin was not required to participate in this study in accordance with the national legislation and the institutional requirements.

AUTHOR CONTRIBUTIONS

MH, TB, and KA contributed to conception and design of the study. AL, KS, and MH contributed to data collection. KA performed the statistical analyses and wrote the first draft of the manuscript. All authors contributed to manuscript revision, read and approved the submitted version.

FUNDING

This research was funded by Extrastiftelsen, grant number 2018/FO202170.

ACKNOWLEDGMENTS

The authors are grateful to all participants who made this study possible, and would also like to thank the Bergen Child Study group.

- young adulthood, the Young-HUNT 1 Study (Norway). *J. Epidemiol. Commun. Health* 66, 995–1000. doi: 10.1136/jech-2011-200047
- Egger, H. L., Costello, E. J., and Angold, A. (2003). School refusal and psychiatric disorders: a community study. *J. Am. Acad. Child Adolesc. Psychiatry* 42, 797–807. doi: 10.1097/01.CHI.0000046865.56865.79
- Finning, K., Ford, T., Moore, D. A., and Ukoumunne, O. C. (2019a). Emotional disorder and absence from school: findings from the 2004 British child and adolescent mental health survey. *Eur. Child Adolesc. Psychiatry* 29, 187–198. doi: 10.1007/s00787-019-01342-4
- Finning, K., Ukoumunne, O. C., Ford, T., Danielsson-Waters, E., Shaw, L., Romero De Jager, I., et al. (2019b). The association between child and adolescent depression and poor attendance at school: a systematic review and meta-analysis. *J. Affect. Disord.* 245, 928–938. doi: 10.1016/j.jad.2018.11.055
- Freudenberg, N., and Ruglis, J. (2007). Reframing school dropout as a public health issue. *Prevent. Chron. Dis.* 4, 1–11.
- Fried, E. I., and Nesse, R. M. (2014). The impact of individual depressive symptoms on impairment of psychosocial functioning. *PLoS One* 9:e90311. doi: 10.1371/journal.pone.0090311
- Fritz, C. O., Morris, P. E., and Richler, J. J. (2012). Effect size estimates: current use, calculations, and interpretation. *J. Exp. Psychol. Gen.* 141, 2–18. doi: 10.1037/a0024338
- Gase, L. N., Kuo, T., Collier, K., Guerrero, L. R., and Wong, M. D. (2014). Assessing the connection between health and education: identifying potential leverage points for public health to improve school attendance. *Am. J. Public Health* 104, e47–e54. doi: 10.2105/AJPH.2014.301977
- González, C., Kearney, C. A., Jiménez-Ayala, C. E., Sanmartín, R., Vicent, M., Inglés, C. J., et al. (2018). Functional profiles of school refusal behavior and their relationship with depression, anxiety, and stress. *Psychiatry Res.* 269, 140–144. doi: 10.1016/j.psychres.2018.08.069

- Goodman, R. (2001). Psychometric properties of the strengths and difficulties questionnaire. *J. Am. Acad. Child Adolesc. Psychiatry* 40, 1337–1345. doi: 10.1097/00004583-200111000-00015
- Gordon, R. S. Jr. (1983). An operational classification of disease prevention. *Public Health Rep.* 98, 107–109.
- Green, H., McGinnity, A., Meltzer, H., Ford, T., and Goodman, R. (2005). *Mental Health of Children and Young People in Great Britain, 2004*. Basingstoke: Palgrave Macmillan. doi: 10.1037/e557702010-001
- Gubbels, J., van der Put, C. E., and Assink, M. (2019). Risk factors for school absenteeism and dropout: a meta-analytic review. *J. Youth Adolesc.* 48, 1637–1667. doi: 10.1007/s10964-019-01072-5
- Hancock, K. J., Sheperd, C. C. J., Lawrence, D., and Zubrick, S. R. (2013). *Student Attendance and Educational Outcomes: Every Day Counts*. Perth: Telethon Institute for Child Health Research.
- Heyne, D., Gren-Landell, M., Melvin, G., and Gentle-Genitty, C. (2018). Differentiation between school attendance problems: why and how? *Cogn. Behav. Pract.* 26, 8–34. doi: 10.1016/j.cbpra.2018.03.006
- Hyde, J. S., Mezulis, A. H., and Abramson, L. Y. (2008). The ABCs of depression: integrating affective, biological, and cognitive models to explain the emergence of the gender difference in depression. *Psychol. Rev.* 115, 291–313. doi: 10.1037/0033-295X.115.2.291
- Hysing, M., Harvey, A. G., Linton, S. J., Askeland, K. G., and Sivertsen, B. (2016). Sleep and academic performance in later adolescence: results from a large population-based study. *J. Sleep Res.* 25, 318–324. doi: 10.1111/jsr.12373
- Hysing, M., Haugland, S., Stormark, K. M., Bøe, T., and Sivertsen, B. (2014). Sleep and school attendance in adolescence: results from a large population-based study. *Scand. J. Public Health* 43, 2–9. doi: 10.1177/1403494814556647
- Hysing, M., Pallesen, S., Stormark, K. M., Lundervold, A. J., and Sivertsen, B. (2013). Sleep patterns and insomnia among adolescents: a population-based study. *J. Sleep Res.* 22, 549–556. doi: 10.1111/jsr.12055
- Ingul, J. M., Havik, T., and Heyne, D. (2019). Emerging school refusal: a school-based framework for identifying early signs and risk factors. *Cogn. Behav. Pract.* 26, 46–62. doi: 10.1016/j.cbpra.2018.03.005
- Ingul, J. M., Klöckner, C. A., Silverman, W. K., and Nordahl, H. M. (2012). Adolescent school absenteeism: modelling social and individual risk factors. *Child Adolesc. Ment. Health* 17, 93–100. doi: 10.1111/j.1475-3588.2011.00615.x
- Ingul, J. M., and Nordahl, H. M. (2013). Anxiety as a risk factor for school absenteeism: what differentiates anxious school attenders from non-attenders? *Ann. Gen. Psychiatry* 12:25. doi: 10.1186/1744-859X-12-25
- Jones, R., Hoare, P., Elton, R., Dunhill, Z., and Sharpe, M. (2009). Frequent medical absences in secondary school students: survey and case-control study. *Arch. Dis. Child.* 94, 763–767. doi: 10.1136/adc.2008.140962
- Kearney, C. A. (2008). An interdisciplinary model of school absenteeism in youth to inform professional practice and public policy. *Educ. Psychol. Rev.* 20, 257–282. doi: 10.1007/s10648-008-9078-3
- Kearney, C. A., and Graczyk, P. (2014). A response to intervention model to promote school attendance and decrease school absenteeism. *Child Youth Care Forum* 43, 1–25. doi: 10.1007/s10566-013-9222-1
- Kessler, R. C., Adler, L., Ames, M., Demler, O., Faraone, S., Hiripi, E., et al. (2005). The World Health Organization adult ADHD self-report scale (ASRS): a short screening scale for use in the general population. *Psychol. Med.* 35, 245–256. doi: 10.1017/S0033291704002892
- Larsson, B., Ingul, J., Jozefiak, T., Leikanger, E., and Sund, A. M. (2016). Prevalence, stability, 1-year incidence and predictors of depressive symptoms among Norwegian adolescents in the general population as measured by the Short Mood and Feelings Questionnaire. *Nord. J. Psychiatry* 70, 290–296. doi: 10.3109/08039488.2015.1109137
- Lawrence, D., Dawson, V., Houghton, S., Goodsell, B., and Sawyer, M. G. (2019). Impact of mental disorders on attendance at school. *Austral. J. Educ.* 63, 5–21. doi: 10.1177/0004944118823576
- Lucas, C. P., Zhang, H., Fisher, P. W., Shaffer, D., Regier, D. A., Narrow, W. E., et al. (2001). The DISC predictive scales (DPS): efficiently screening for diagnoses. *J. Am. Acad. Child Adolesc. Psychiatry* 40, 443–449. doi: 10.1097/00004583-200104000-00013
- Lundervold, A. J., Breivik, K., Posserud, M. B., Stormark, K. M., and Hysing, M. (2013). Symptoms of depression as reported by Norwegian adolescents on the short mood and feelings questionnaire. *Front. Psychol.* 4:613. doi: 10.3389/fpsyg.2013.00613
- Maslowsky, J., and Ozer, E. J. (2014). Developmental trends in sleep duration in adolescence and young adulthood: evidence from a national United States sample. *J. Adolesc. Health* 54, 691–697. doi: 10.1016/j.jadohealth.2013.10.201
- Maynard, B. R., Vaughn, M. G., Nelson, E. J., Salas-Wright, C. P., Heyne, D. A., and Kremer, K. P. (2017). Truancy in the United States: examining temporal trends and correlates by race, age, and gender. *Child. Youth Serv. Rev.* 81, 188–196. doi: 10.1016/j.childyouth.2017.08.008
- Mcshane, G., Walter, G., and Rey, J. M. (2001). Characteristics of adolescents with school refusal. *Austral. New Zeal. J. Psychiatry* 35, 822–826. doi: 10.1046/j.1440-1614.2001.00955.x
- Muthén, L., and Muthén, B. (1998–2017). *Mplus User's Guide*, 8th Edn. Los Angeles, CA: Muthén and Muthén.
- Mykletun, A., Overland, S., Dahl, A. A., Krokstad, S., Bjerkeset, O., Glozier, N., et al. (2006). A population-based cohort study of the effect of common mental disorders on disability pension awards. *Am. J. Psychiatry* 163, 1412–1418. doi: 10.1176/ajp.2006.163.8.1412
- Nayak, A., Sangoi, B., and Nachane, H. (2018). School refusal behavior in Indian children: analysis of clinical profile, psychopathology and development of a best-fit risk assessment model. *Indian J. Pediatr.* 85, 1073–1078. doi: 10.1007/s12098-018-2631-2
- O'Connell, M., Boat, T., and Warner, K. (2009). *Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities*. Washington, DC: National research council and institute of medicine of the national academies.
- Reigstad, B., Jorgensen, K., Sund, A. M., and Wichstrom, L. (2010). Prevalences and correlates of sleep problems among adolescents in specialty mental health services and in the community: what differs? *Nord. J. Psychiatry* 64, 172–180. doi: 10.3109/08039480903282392
- Salk, R. H., Petersen, J. L., Abramson, L. Y., and Hyde, J. S. (2016). The contemporary face of gender differences and similarities in depression throughout adolescence: development and chronicity. *J. Affect. Disord.* 205, 28–35. doi: 10.1016/j.jad.2016.03.071
- Sharp, C., Goodyer, I., and Croudace, T. (2006). The short mood and feelings questionnaire (SMFQ): a unidimensional item response theory and categorical data factor analysis of self-report ratings from a community sample of 7-through 11-year-old children. *J. Abnorm. Child Psychol.* 34, 365–377. doi: 10.1007/s10802-006-9027-x
- Sivertsen, B., Harvey, A. G., Lundervold, A. J., and Hysing, M. (2014). Sleep problems and depression in adolescence: results from a large population-based study of Norwegian adolescents aged 16–18 years. *Eur. Child Adolesc. Psychiatry* 23, 681–689. doi: 10.1007/s00787-013-0502-y
- Skedgell, K., and Kearney, C. A. (2016). Predictors of absenteeism severity in truant youth: a dimensional and categorical analysis. *Am. Second. Educ.* 45:12.
- Skedgell, K., and Kearney, C. A. (2018). Predictors of school absenteeism severity at multiple levels: a classification and regression tree analysis. *Child. Youth Serv. Rev.* 86, 236–245. doi: 10.1016/j.childyouth.2018.01.043
- Slavish, D. C., and Graham-Engeland, J. E. (2015). Rumination mediates the relationships between depressed mood and both sleep quality and self-reported health in young adults. *J. Behav. Med.* 38, 204–213. doi: 10.1007/s10865-014-9595-0
- StataCorp (2017). *Stata Statistical Software: Release 15*. College Station, TX: StataCorp LLC.
- Thabrew, H., Stasiak, K., Bavin, L.-M., Frampton, C., and Merry, S. (2018). Validation of the mood and feelings questionnaire (MFQ) and short mood and feelings questionnaire (SMFQ) in New Zealand help-seeking adolescents. *Int. J. Methods Psychiatr. Res.* 27:e1610. doi: 10.1002/mpr.1610
- Tonge, B. J., and Silverman, W. K. (2019). Reflections on the field of school attendance problems: for the times they are a-changing? *Cogn. Behav. Pract.* 26, 119–126. doi: 10.1016/j.cbpra.2018.12.004
- van Zundert, R. M., van Roekel, E., Engels, R. C., and Scholte, R. H. (2015). Reciprocal associations between adolescents' night-time sleep and daytime affect and the role of gender and depressive symptoms. *J. Youth Adolesc.* 44, 556–569. doi: 10.1007/s10964-013-0009-3
- Vaughn, M. G., Maynard, B. R., Salas-Wright, C. P., Perron, B. E., and Abdon, A. (2013). Prevalence and correlates of truancy in the US: results from a national sample. *J. Adolesc.* 36, 767–776. doi: 10.1016/j.adolescence.2013.03.015

- Wang, Y., and Yip, T. (2019). Sleep facilitates coping: moderated mediation of daily sleep, ethnic/racial discrimination, stress responses, and adolescent well-being. *Child Dev.* [Epub ahead of print]. doi: 10.1111/cdev.13324
- Werner-Seidler, A., Perry, Y., Calear, A. L., Newby, J. M., and Christensen, H. (2017). School-based depression and anxiety prevention programs for young people: a systematic review and meta-analysis. *Clin. Psychol. Rev.* 51, 30–47. doi: 10.1016/j.cpr.2016.10.005
- Wolke, D., Waylen, A., Samara, M., Steer, C., Goodman, R., Ford, T., et al. (2009). Selective drop-out in longitudinal studies and non-biased prediction of behaviour disorders. *Br. J. Psychiatry J. Ment. Sci.* 195, 249–256. doi: 10.1192/bjp.bp.108.053751
- Wood, J. J., Lynne-Landsman, S. D., Langer, D. A., Wood, P. A., Clark, S. L., Eddy, J. M., et al. (2012). School attendance problems and youth psychopathology: structural cross-lagged regression models in three longitudinal data sets. *Child Dev.* 83, 351–366. doi: 10.1111/j.1467-8624.2011.01677.x
- Conflict of Interest:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2020 Askeland, Bøe, Lundervold, Stormark and Hysing. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



Dropping Out of School: Explaining How Concerns for the Family's Social-Image and Self-Image Predict Anger

Nicolay Gausel^{1*} and David Bourguignon²

¹Faculty of Health and Welfare, Østfold University College, Fredrikstad, Norway, ²PerSEUs, Sciences Humaines et Sociales, Université de Lorraine (Metz), Nancy, France

OPEN ACCESS

Edited by:

Christopher Kearney,
University of Nevada,
Las Vegas, United States

Reviewed by:

Fareed Bordbar,
University of Alabama, United States
Frederic Nils,
Catholic University of Louvain,
Belgium

*Correspondence:

Nicolay Gausel
nicolay.gausel@hiol.no

Specialty section:

This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Psychology

Received: 12 February 2020

Accepted: 07 July 2020

Published: 04 August 2020

Citation:

Gausel N and Bourguignon D (2020)
Dropping Out of School: Explaining
How Concerns for the Family's
Social-Image and Self-Image
Predict Anger.
Front. Psychol. 11:1868.
doi: 10.3389/fpsyg.2020.01868

As dropping out of school is considered a violation of moral norms, the family associated with the drop out can react with anger directed toward the pupil or with anger directed at others that might know of the drop out. In our vignette study ($N = 129$), we found that anger at others and anger at the pupil were significantly higher if our community participants imagined a drop out from a vocational education rather than a general education. As expected, anger directed at others was fully explained by a concern for the family's social-image (i.e., a concern for condemnation by others), while anger directed at the former pupil was fully explained by a concern for the family's self-image (i.e., a concern for their moral self-image). Thoughts for how to better understand family reactions in relation to drop out are discussed.

Keywords: self, social, image, dropping out, school, anger, stigma, family

INTRODUCTION

«Hvorfor er det sånn at jeg må være flau, hvorfor må de som har valgt et yrkesfaglig program bli stemplet som dumme, teorisvake og skoleleie?» [“Why do I have to be embarrassed, how come those who choose vocational education are labeled as stupid, theoretically weak and sick of school?”]

- Girl, 17 years, vocational student (interviewed in Aftenposten, 2015, translated by us).

Even though most educational programs are organized in order to support integration into the social and professional world (Beblavy et al., 2011), some pupils decide to drop out of these educational programs. As a drop out has the potential to be perceived by others as a violation of the expected egalitarian integration path (Van Hoorn and Maseland, 2013), their norm violating decision is often met with stigmatizing condemnation by the larger community (Weiner et al., 1988; Dorn, 1993; Hebl et al., 2007; Gausel, 2014). As a response to condemnation, people sometimes respond with blame (Gausel, 2014) and anger (Gausel et al., 2018). However, little if nothing is known about the families' reactions and especially whether families respond with anger if their son or daughter drops out of school.

In order to investigate whether families would respond with anger to condemnation for dropping out of school, we asked community participants to imagine how a family would react if their son or daughter dropped out of an educational program. We expected that the more our participants expressed that the family would be concerned about the moral self-image of the family, the more the family would direct anger at their son or daughter (i.e., the former pupil). In contrast, the more our participants expressed that the family would be concerned about the social-image of the family, the more the family would direct anger toward others that might learn of the drop out.

Vocational Education: Dropping Out

In most western countries, the high-school (or upper secondary school) educational system consists of general education and vocational education. Even though most pupils choose vocational education in order to acquire a professional job qualification, the real-world citation by the 17-year old girl in the introduction demonstrates that vocational education has become to be viewed as a second-chance education (Karmel and Woods, 2008) for pupils falsely believed to be less intelligent and thus having “a lower level of general aptitude” (Arum and Shavit, 1995, p.188). Due to this stigmatized belief, vocational pupils are therefore seen to be suited for professional work, instead of the more “university-oriented” general education (Grootaers et al., 1999; Gausel, 2014). As a consequence of this stigma, many pupils within the vocational education report that they feel that others look down at them for following a vocational program (Spruyt et al., 2015).

As the educational system represents the egalitarian view that everyone deserves a fair chance of bettering their position regardless of their background (Beblavy et al., 2011), dropping out of the educational system represents “a serious problem, not only for the individual, the school system, and the community, but also for society.” (Christle et al., 2007, p. 325). Even though dropping out – in general – is understood as a problematic norm violation (Dorn, 1993), dropping out from a vocational education seems to be *more* problematic for the pupil and its family for at least two reasons: firstly, dropping out violates the social ascension belief that members of low status groups should climb the social ladder *via* the educational system (Festinger, 1954; Hauser et al., 2000). Secondly, as western people typically believe that one is responsible for one's own fate (Bénabou and Tirole, 2004), a discontinuation of schooling violates the meritocracy belief that individuals should demonstrate perseverance (Lerner, 1980). Dropping out of a vocational education can therefore be perceived by the larger society as the pupil is entering a competitive labor market without formal means to partake (Christle et al., 2007). Thus, the pupil is risking unemployment and dependence on welfare benefits (Christle et al., 2007; King et al., 2010). As people generally react harshly toward norm violators (Crocker et al., 1998; Major and O'Brien, 2005; Täuber et al., 2018), dropping out of vocational education has the potential to cause considerable psychological distress, not only for the pupil (Dorn, 1993), but also for the family associated with the drop out (Gausel, 2014) as families are commonly seen as a group (Scabini and Manzi, 2011).

Anger: The Role of the Self-Image and the Social-Image

According to Gausel and Leach (2011), a norm violation of this kind can be appraised in at least two main ways: firstly, as an indication that there is something morally defective with the family, since they allowed a violation of a societal norm (i.e., a threat to the moral self-image of the family) by failing to prevent the drop out, and thus, failing take advantage of the social ascension possibility and failing to demonstrate perseverance. Failures that are appraised as representing a threat to the self-image are often associated with anger directed at the self (Miller and Tangney, 1994; Gausel and Leach, 2011) or one's in-group (Gausel and Leach, 2011). As it is well known that families represent a group and its members are group members (for discussions, see Scabini and Manzi, 2011), it is interesting to observe that on a family-related level, Gausel et al. (2016) found that participants appraising themselves as suffering from a morally defective self-image directed anger toward themselves as a consequence for their abusive behavior toward a family member. And Berndsen and McGarty (2012) found that majority group members reminded about moral failures committed by their group expressed anger at their own group in response to these failures. Similar to this, Gausel et al. (2012) found that the more their participants appraised their in-group moral failures as a threat to their in-group self-image, the more anger they directed toward their own group. Hence, in response to the current study, we expected that a concern for the self-image of the family as caused by the drop out would be predictive of self-directed anger.

Secondly, as there is a real risk that failures can draw condemning attention from others (Gausel and Leach, 2011), a drop out may pose a serious threat to the family's social-image as respectable in the eyes of others. If such a threat to the social-image is appraised, people often react with anger directed at the others that can possibly come to condemn them for their failure (Gausel, 2013). In empirical support of this, a recent study on family therapy and reciprocal partner-violence, Zahl-Olsen et al. (2019) found that outburst of anger and violence toward the other was associated with appraised condemnation manifested through rejecting behavior from the other as well as criticism for failure. Gausel et al. (2018) found that the more victims of immorality feared that they would be condemned for their own perpetrating failures in a reciprocal conflict, the more they reacted with hostile anger toward others. In response to the current study, we expected that a concern for the family's social-image would be predictive of other-directed anger.

In sum, there is ground to assume that being associated with dropping out of school can be appraised by a family as a threat to their self-image as dropping out symbolize the failure to demonstrate perseverance, as well as the failure to conform with the social ascension belief. This might very well predict anger directed at the responsible one, i.e., the pupil. That said, there is also ground to believe that the eyes of others are now critically resting on the family. Thus, being

associated with dropping out of school represents a vivid threat to the social-image of the family, especially if they fear that these others get to find out about the failure. If so, the family might very well direct anger against these others.

The Current Study

In order to test the above assumptions, we returned to a large-scale study where parts have previously been reported in a manuscript by Gausel (2014). However, none of the measures, and analyses and none of the correlations reported here in this manuscript have been examined or reported elsewhere. For the sake of clarity, we illustrate how the measures are used across the two manuscripts in **Table 1**.

In line with previous research and theorizing, we expected that our community participants would regard a drop out as a wrong decision, and that the drop out is expected to hurt the family's self and social-image. Importantly, based on the folk-view that a vocational education can be seen as a "second-chance" education, we anticipated the following results: firstly, we expected that a drop out from a vocational education would be seen to be making the family more upset, i.e., make them angrier at the former pupil, and angrier at others, than if the drop out had happened in a general education program. Secondly, anger directed at the former pupil would be explained by a concern for the family's self-image. In contrast, anger directed at others would be explained by a concern for the family's social-image.

MATERIALS AND METHODS

Participants

Hundred and twenty nine community participants (62.2% women, 37.8% men; *mean age*: 36.1, *age range*: 17–74 years) agreed to partake in an anonymous, hard copy standardized questionnaire study focusing on social perceptions. They were approached individually in parks, cafes, and libraries in a medium-sized city in Norway. Participants were randomized into two conditions: "Vocational education drop out" ($N = 64$) and "General education drop out" ($N = 65$).

Procedure and Measures

On the first page of the questionnaire participants read the information of the study as described above and agreed to partake in the study. On the same page, we asked the participant to fill in demographics of gender and age. On the next page, "vocational

education drop out" participants were asked to imagine the following: "A student at the (the name of a locally known vocational education high-school) decided to drop out from the education in the middle of the semester." Participants allocated to the "General education drop out" condition were asked to imagine the same thing, only now naming a locally known general education high-school. On the third page, participants were presented with standardized items measuring how this drop out could be appraised by the family of the student, and how they would respond to the drop out. When finished, participants were debriefed and thanked. All items were adopted from Gausel et al. (2012, 2016, 2018) and ranging from 1 (not at all) to 7 (very much).

Anger

Anger directed at the pupil ($\alpha = 0.96$) was measured with: "The family would be angry at the pupil," "The family would be cross at the pupil," and "The family would be irritated at the pupil." *Anger directed against those who know* ($\alpha = 0.93$) was measured using three items: "The family would be angry at those who know what the pupil did," "The family would be cross at those who know what the pupil did," and "The family would be irritated at those who know what the pupil did."

Appraisals of Social-Image and Self-Image

The appraisal of being condemned by others, and thus causing damage to the family's *social image* ($\alpha = 0.87$) was measured using three statements: "The family will think they can be isolated from others because of this," "The family will think that their reputation can be damaged because of what the pupil did," and "The family will think that others might not have the same respect for them because of this." The appraisal of damage to the family's *moral self-image* ($\alpha = 0.89$) was measured with three statements: "The family will think that what the pupil did represented a moral failure in the family," "The family will think they are defective in one way or another," and "The family will think this represents a 'black mark' in their shared memory."

Appraising the Drop Out as Wrong

We measured whether participants appraised the dropout as wrong ($\alpha = 0.85$) using four items: "What the pupil did was wrong," "What the pupil did was bad," "What the pupil did was doubtful," and "What the pupil did was not good."

RESULTS

Participants View of Dropping Out of School as Wrong or Not

A one way ANOVA using IBM SPSS 22 (see **Table 2** for scale inter-correlations and descriptive statistics) made it clear that participants considered it wrong to drop out from college irrelevant of education, $F(1,128) = 1.16$, $p = 0.28$, $\text{partial}\eta^2 = 0.01$. Interestingly, they saw dropping out from the vocational education as slightly more wrong than from a general education ($M = 4.28$, $SD = 1.67$ and $M = 3.97$, $SD = 1.54$, respectively).

TABLE 1 | Illustration of the measures used.

Variables	MS 1 (published in SPE)	MS 2 (current)
Embarrassing failure	x	
Felt rejection	x	
Blaming the school	x	
Anger directed at the pupil		x
Anger directed at others		x
Social-image		x
Self-image		x

TABLE 2 | Scale inter-correlations and descriptive statistics.

Variable	1	2	3	4	5
1 Wrong decision	-				
2 Self-image (moral defect)	0.31	-			
3 Social-image (condemned by others)	0.17	0.69	-		
4 Anger directed at those who know	0.20	0.52	0.58	-	
5 Anger directed at the pupil	0.38	0.51	0.46	0.47	-
Mean	4.13	2.53	2.40	1.77	3.20
SD	1.60	1.42	1.35	1.14	1.69
α	0.85	0.89	0.87	0.93	0.96

N = 129. Response scale ranged from not at all (1) to very much (7).

A Concern for Self-Image and Social-Image

A *Multivariate ANOVA* demonstrated no significant overall effect on the appraisal of self-image and social-image, $F(2,126) = 0.587$, $p = 0.56$, $\text{partial}\eta^2 = 0.01$. A univariate analysis on each of the two variables showed that participants in the “*Vocational education drop out*” and the “*General education drop out*,” saw the drop out of school as equally damaging to the family’s self-image, $F(1,127) = 1.16$, $p = 0.284$, $\text{partial}\eta^2 = 0.01$ ($M = 2.67$, $SD = 1.53$ and $M = 2.40$, $SD = 1.31$, respectively), and the family’s social-image, $F(1,127) = 0.73$, $p = 0.395$, $\text{partial}\eta^2 = 0.01$, ($M = 2.51$, $SD = 1.39$ and $M = 2.30$, $SD = 1.30$, respectively) even though the means were a bit higher for participants in the vocational education drop out condition.

Participants View on Anger Directed at the Pupil and Anger Directed at Others

A *Multivariate ANOVA* demonstrated an overall effect on our main dependent variables of anger, $F(2,123) = 3.10$, $p = 0.049$, $\text{partial}\eta^2 = 0.05$. As expected, there was a significant univariate effect on anger directed at others who would know about the drop out, $F(1,124) = 4.51$, $p = 0.036$, $\text{partial}\eta^2 = 0.04$. The pairwise comparison showed that participants in the “*Vocational education drop out*” condition considered it as more likely that the family would be angry at others who knew about the drop out ($M = 1.97$, $SD = 1.27$), than did participants in the “*General education drop out*” condition ($M = 1.55$, $SD = 0.95$). As expected, there was a significant univariate effect on anger directed at the pupil, $F(1,124) = 4.53$, $p = 0.035$, $\text{partial}\eta^2 = 0.04$. The pairwise comparison demonstrated that participants in the “*Vocational education drop out*” condition considered it likely that the family would be more angry with the pupil ($M = 3.51$, $SD = 1.74$), than did participants in the “*General education drop out*” condition ($M = 2.88$, $SD = 1.58$).

Structural Equation Modeling: Explaining Direction of Anger

In order to explain anger directed at the pupil and anger directed at others, we specified a latent model using *Structural Equation Modeling* with *AMOS 22* software. Mirroring the two conditions, we used effect coding (vocational education drop out = +1 and general education drop out = −1) in order to trace the main effects of the experimental conditions (represented with

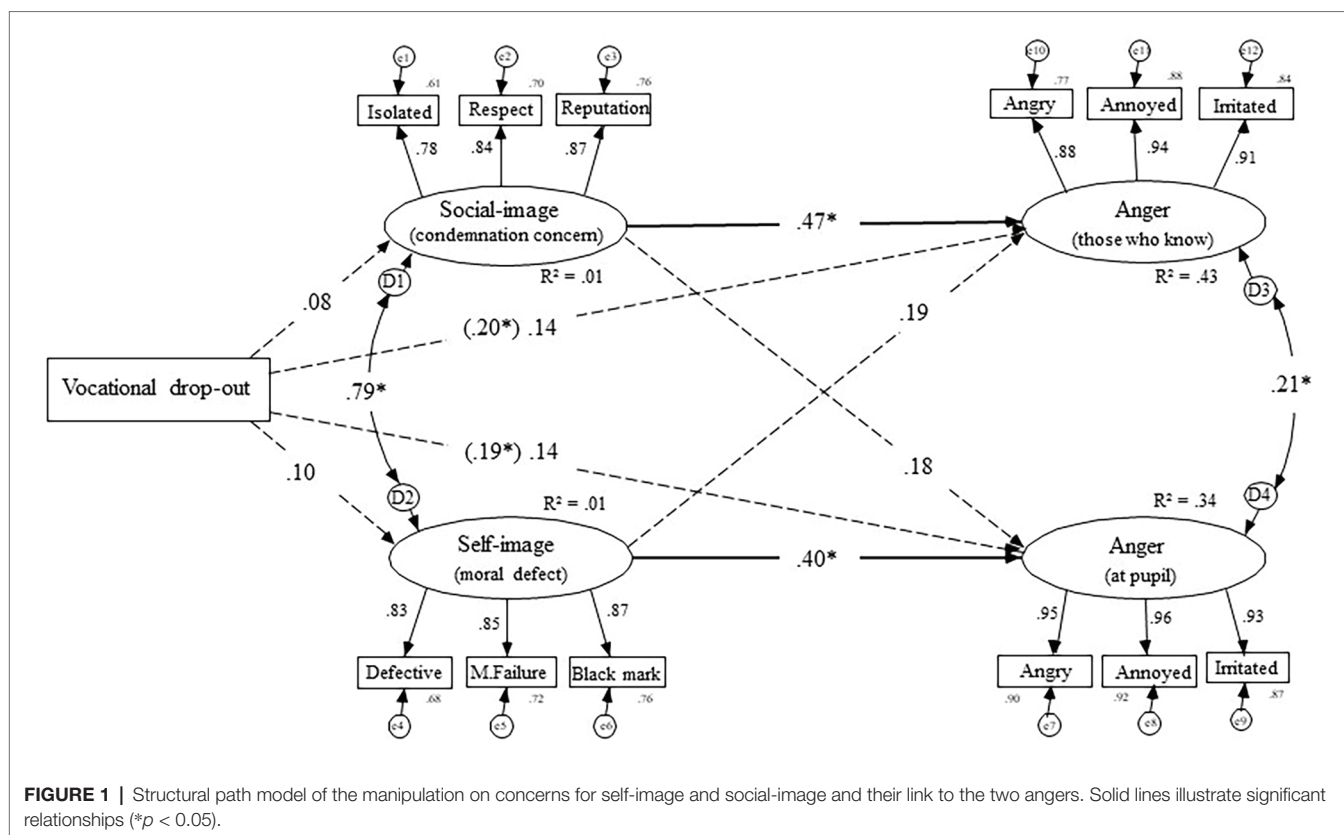
a manifest variable) on our two main dependent variables; anger directed at the self and anger directed at others. Since we expected a concern for the family’s self-image and concerns for the family’s social-image to explain the relationship with anger, we allowed them to mediate the relationship between the experimental conditions and the two anger variables (see **Figure 1**). This model fit the data very well, $\chi^2(56) = 80.65$, $p = 0.017$, $\chi^2/df = 1.44$, $IFI = 0.982$, $CFI = 0.982$, $RMSEA = 0.059$.

As seen in the upper half of **Figure 1**, the original link between the experimental conditions and anger directed at the pupil ($\beta = 0.19$, $p = 0.031$) dropped to non-significant ($\beta = 0.14$, $p = 0.077$), indicating that the relationship was mediated by concern for the family’s self-image. In contrast, as we argued that the motivation behind anger directed at others was a concern for the family’s social-image, the lower half of **Figure 1** illustrate that the original link between the experimental conditions and anger directed at others ($\beta = 0.20$, $p = 0.032$) dropped to non-significant ($\beta = 0.14$, $p = 0.062$). Hence, anger at others was mediated by concern for the family’s self-image.

DISCUSSION

Even though there can be good reasons for dropping out of an educational program, a drop out generally violates societal norms (e.g., Dorn, 1993; Gausel, 2014) such as the meritocracy norm of perseverance (Lerner, 1980) and taking advantage of the possibility to climb the social ladder *via* the educational system (Festinger, 1954; Hauser et al., 2000; Van Hoorn and Maseland, 2013). Probably therefore, our community participants considered dropping out to be moderately wrong regardless of the educational path, and by such, they lend support to Christle et al. (2007) view that a drop out represents a serious challenge, not only for the society but also for the school system, the community and the individual. Similarly, the decision to drop out was also viewed by the participants as a cause for concern in regard of both the family’s self-image and its social-image. This finding support Gausel and Leach (2011) argumentation that a failure to adhere to norms will likely threaten the self-image and the social-image of the individual (or group) associated with the failure.

In line with our hypotheses, we found that participants expected the family to be angrier at the former pupil for



dropping out of vocational education than if dropping out of a general education. This is understandable, because expressing anger at the pupil might communicate that the family is disappointed over the decision to drop out of vocational education in an increasingly competitive labor market (Grootaers et al., 1999; Van Hoorn and Maseland, 2013). Moreover, since anger directed at the former pupil was explained by concern for moral self-image, the findings support the arguments of Gausel and Leach (2011) that a threat to self-image will likely motivate self-directed anger.

Also in line with our hypotheses, we found that participants in the vocational education condition expected the family to be angrier at others for the drop out than did those in the general education condition. As expected, the motivation to direct anger at others was explained by the concern for loss of respect in the eyes of others (i.e., the threat to the family's social-image). This finding is in line with Gausel and Leach (2011) argument that the threat to the social-image is a motivator of anti-social responses and hostility. Moreover, this finding bears resemblance to Zahl-Olsen et al. (2019) findings where anger and violence in families seems to be fueled by rejecting criticism for failure. It also lends support to Gausel et al. (2018) findings that victims of failures reacted with hostile anger toward others due to the fears that their social-image would be damaged. By such, it appears that the community participants expected reactions similar to those reported in recent research and theorizing on anger and anti-social motivations.

Possible Limitations

It should be underlined that our study focused on how people in general think a family would respond to a drop out. Naturally, it would be ideal to investigate how actual families of those who drop out would respond to our research questions. Even though this might be seen as a more "natural" approach, it is useful to remember that the vignette method has been found to produce results equal to other ecological methods (Robinson and Clore, 2001) only without the ethical dilemmas attached with real-world challenges. Moreover, as people are good at imagining how others and themselves would feel and do in various situations (e.g., Decety and Grèzes, 2006), the vignette design seems to be a useful tool on topics such as failures and how to cope with them.

That said, one should be aware of the practical and ethical difficulties to find and locate families with pupils that have dropped out of school. In relation to the practical difficulties of locating them, we can inform that we first tried to contact the two different schools mentioned in our scenario in order to gain information about the drop outs. However, we were not granted this information and were thus left in the dark in response to locating these families. That said, out of ethical concerns, families of those who drop out might already have been exposed for stigmatizing attitudes and thus have experienced many emotional and practical hardships. One can imagine that if we were to locate them, it might not be welcomed if we were to address them about something they might very well be angry about.

Another limitation rests within the participant pool. We did not check if they had background from a vocational or a general education, and thus, we cannot guarantee that this would not have influenced their perception of drop out from the one or the other educational programs. Moreover, we did not ask for, and therefore could not control for whether their level of education influenced the results in any way. That said, we aimed for a randomized pool of community participants (instead of the more “normal” student participant pool) that were more or less mature participants with a mean-age of 36 years. We do believe that these participants have enough life-experience to be more moderate in their beliefs about the world than younger ones. Hence, we rest assured that the results based on the feedback from our participants can be trusted.

PRACTICAL THOUGHTS

Our findings indicate that professional helpers working with drop outs might meet families that, ironically, communicate anger instead of gratitude for the help they are given. If so, it could be helpful to know that this anger is likely explained by their fear of condemnation and feared damage to their social-image as a respectable family for the “failure” to prevent their son or daughter from dropping out of an educational program. Moreover, if the family is angry at the former pupil then the professional helper might see that their anger can be explained by the worry that there is a moral failure within the family since they could not prevent the drop out. In any way, we think helpers can use our model to better understand how families cope with the social and family-related challenges that a norm violating drop out might represent.

REFERENCES

- Aftenposten (2015). Available at: <https://www.aftenposten.no/meninger/sid/i/dMKq/hvorfor-maa-jeg-vaere-flau-over-aa-gaa-yrkesfag?>
- Arum, R., and Shavit, Y. (1995). Secondary vocational education and the transition from school to work. *Soc. Educ.* 68, 187–204. doi: 10.2307/2112684
- Beblavy, M., Thum, A. E., and Veselkova, M. (2011). Education policy and welfare regimes in OECD countries: Social stratification and equal opportunity in education. CEPS working document, 357. doi: 10.2139/ssrn.2402726
- Bénabou, R., and Tirole, J. (2004). Report No.: 230. Incentives and prosocial behavior, Discussion papers in economics/Princeton University, Woodrow Wilson School of Public and International Affairs. Available at: <http://hdl.handle.net/10419/23457>
- Berndsen, M., and McGarty, C. (2012). Perspective taking and opinions about forms of reparation for victims of historical harm. *Pers. Soc. Psychol. Bull.* 38, 1316–1328. doi: 10.1177/0146167212450322
- Christle, C. A., Jolivet, K., and Nelson, C. M. (2007). School characteristics related to high school dropout rates. *Remedial Spec. Educ.* 28, 325–339. doi: 10.1177/07419325070280060201
- Crocker, J., Major, B., and Steele, C. M. (1998). “Social Stigma” in *Handbook of social psychology*. Vol. 2. eds. D. Gilbert, S. T. Fiske and G. Lindzey (Boston, MA: McGraw Hill), 504–553.
- Decety, J., and Grèzes, J. (2006). The power of simulation: imagining one’s own and other’s behavior. *Brain Res.* 1079, 4–14. doi: 10.1016/j.brainres.2005.12.115
- Dorn, S. (1993). Origins of the “dropout problem”. *Hist. Educ. Q.* 33, 353–373. doi: 10.2307/368197
- Festinger, L. (1954). A theory of social comparison processes. *Hum. Relat.* 7, 117–140. doi: 10.1177/001872675400700202
- Gausel, N. (2013). “Self-reform or self-defense? Understanding how people cope with their moral failures by understanding how they appraise and feel about their moral failures” in *Walk of shame*. eds. M. Moshe and N. Corbu (Hauppauge, NY, USA: Nova Publishers), 191–208.
- Gausel, N. (2014). It’s not our fault! Explaining why families might blame the school for failure to complete a high-school education. *Soc. Psychol. Educ.* 17, 609–616. doi: 10.1007/s11218-014-9267-5
- Gausel, N., and Leach, C. W. (2011). Concern for self-image and social-image in the management of moral failure: rethinking shame. *Eur. J. Soc. Psychol.* 41, 468–478. doi: 10.1002/ejsp.803
- Gausel, N., Leach, C. W., Mazziotto, A., and Feuchte, F. (2018). Seeking revenge or seeking reconciliation? How concern for social-image and felt shame helps explain responses in reciprocal intergroup conflict. *Eur. J. Soc. Psychol.* 48, O62–O72. doi: 10.1002/ejsp.2295
- Gausel, N., Leach, C. W., Vignoles, V. L., and Brown, R. (2012). Defend or repair? Explaining responses to in-group moral failure by disentangling feelings of shame, inferiority and rejection. *J. Pers. Soc. Psychol.* 102, 941–960. doi: 10.1037/a0027233
- Gausel, N., Vignoles, V. L., and Leach, C. W. (2016). Resolving the paradox of shame: differentiating among specific appraisal-feeling combinations explains pro-social and self-defensive motivation. *Motiv. Emot.* 40, 118–139. doi: 10.1007/s11031-015-9513-y
- Grootaers, D., Franssen, A., and Bajoit, G. (1999). Mutations de l’enseignement technique et professionnel et différenciation des stratégies éducatives (Communauté française de Belgique). *Cahiers de la recherche en éducation* 6, 21–55. doi: 10.7202/1017010ar

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed through the standardized checklist of the Norwegian Centre for Research Data and found not to be subject to notification. Written informed consent from the participants’ legal guardian/next of kin was not required to participate in this study in accordance with the national legislation and the institutional requirements.

AUTHOR CONTRIBUTIONS

NG did the design and analysis and contributed to the interpretation of the data, theoretical framework and write-up, and approved submission. DB contributed to the interpretation of the data, theoretical framework and write-up, and approved submission. All authors contributed to the article and approved the submitted version.

ACKNOWLEDGMENTS

The authors would like to thank Agnes Serine Bossum, Linda Lie Christensen, Cathrine Solum Hansen, and Kine Maria Laup Karlsten, Fredrikstad, Norway, for their help collecting data as part of their Bachelor-thesis.

- Hauser, R. M., Warren, J. R., Huang, M. H., and Carter, W. Y. (2000). "Occupational status, education, and social mobility in the meritocracy" in *Meritocracy and economic inequality*. eds. K. Arrow, S. Bowles and S. Durlauf (Princeton, NJ: Univ. Princeton Press), 179–229.
- Hebl, M. R., King, E. B., Glick, P., Singletary, S. L., and Kazama, S. (2007). Hostile and benevolent reactions toward pregnant women. Complementary interpersonal punishments and rewards that maintain traditional roles. *J. Appl. Psychol.* 92, 1499–1511. doi: 10.1037/0021-9010.92.6.1499
- Karmel, T., and Woods, D. (2008). *Second chance vocational education and training*. Adelaide: National Centre for Vocational Education Research.
- King, E., Knight, J., and Hebl, M. (2010). The influence of economic conditions on aspects of stigmatization. *J. Soc. Issues* 66, 446–460. doi: 10.1111/j.1540-4560.2010.01655.x
- Lerner, M. J. (1980). *The belief in a just world: A fundamental delusion*. New York: Plenum.
- Major, B., and O'Brien, L. T. (2005). The social psychology of stigma. *Annu. Rev. Psychol.* 56, 393–421. doi: 10.1146/annurev.psych.56.091103.070137
- Miller, R. S., and Tangney, J. P. (1994). Differentiating embarrassment and shame. *J. Soc. Clin. Psychol.* 13, 273–287. doi: 10.1521/jscp.1994.13.3.273
- Robinson, M. D., and Clore, G. L. (2001). Simulation, scenarios, and emotional appraisal: testing the convergence of real and imagined reactions to emotional stimuli. *Pers. Soc. Psychol. Bull.* 27, 1520–1532. doi: 10.1177/01461672012711012
- Scabini, E., and Manzi, C. (2011). "Family processes and identity" in *Handbook of identity theory and research*. eds. S. J. Schwartz, K. Luyckx and V. L. Vignoles (New York, NY: Springer), 565–584.
- Spruyt, B., Van Droogenbroeck, F., and Kavadias, D. (2015). Educational tracking and sense of futility: a matter of stigma consciousness? *Oxf. Rev. Educ.* 41, 747–765. doi: 10.1080/03054985.2015.1117971
- Täuber, S., Gausel, N., and Flint, S. W. (2018). Weight bias internalization: the maladaptive effects of moral condemnation on intrinsic motivation. *Front. Psychol.* 9:1836. doi: 10.3389/fpsyg.2018.01836
- Van Hoorn, A., and Maseland, R. (2013). Does a protestant work ethic exist? Evidence from the well-being effect of unemployment. *J. Econ. Behav. Organ.* 91, 1–12. doi: 10.1016/j.jebo.2013.03.038
- Weiner, B., Perry, R. P., and Magnusson, J. (1988). An attributional analysis of reactions to stigma. *J. Pers. Soc. Psychol.* 55, 738–748. doi: 10.1037/0022-3514.55.5.738
- Zahl-Olsen, R., Gausel, N., Zahl-Olsen, A., Bjerregaard, B. T., Håland, Å. T., and Tilden, T. (2019). Physical couple and family violence among clients seeking therapy: identifiers and predictors. *Front. Psychol.* 10:2847. doi: 10.3389/fpsyg.2019.02847

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2020 Gausel and Bourguignon. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.



A Scoping Review of Constructs Measured Following Intervention for School Refusal: Are We Measuring Up?

David Heyne^{1*}, Johan Strömbeck^{2,3}, Katarina Alanko³, Martin Bergström⁴ and Robin Ulriksen⁵

¹ Institute of Psychology, Leiden University, Leiden, Netherlands, ² Magelungen Utveckling AB, Stockholm, Sweden, ³ Faculty of Arts, Psychology and Theology, Åbo Akademi University, Turku, Finland, ⁴ School of Social Work, Lund University, Lund, Sweden, ⁵ BI Norwegian Business School, Oslo, Norway

OPEN ACCESS

Edited by:

Douglas F. Kauffman,
Medical University of the Americas –
Nevis, United States

Reviewed by:

Hu Jian,
Jiangxi University of Finance
and Economics, China
Candido J. Ingles,
Miguel Hernández University of Elche,
Spain
Ricardo Sanmartín,
University of Alicante, Spain

*Correspondence:

David Heyne
heyne@fsw.leidenuniv.nl

Specialty section:

This article was submitted to
Educational Psychology,
a section of the journal
Frontiers in Psychology

Received: 24 December 2019

Accepted: 23 June 2020

Published: 20 August 2020

Citation:

Heyne D, Strömbeck J, Alanko K,
Bergström M and Ulriksen R (2020) A
Scoping Review of Constructs
Measured Following Intervention
for School Refusal: Are We Measuring
Up? *Front. Psychol.* 11:1744.
doi: 10.3389/fpsyg.2020.01744

Reviews of the effectiveness of interventions for school refusal (SR) rely upon well-conducted primary studies. Currently there are no guidelines for those conducting primary studies about the measurement of outcome following intervention for SR. Most people would agree that it is important to measure school attendance as an outcome but there has been little discussion about other constructs that warrant measurement. To facilitate this discussion and support the development of guidelines, we conducted a scoping review of constructs measured in studies evaluating intervention for SR. We screened the title and abstract of 3,213 publications found in peer-reviewed journals between 1980 and 2019. After full text review of 271 publications, 50 publications describing 51 studies were included. Results address the frequency with which constructs were measured, along with instruments used, informants, and time-points for measurement. Based on the results, we offer guidelines for choosing constructs to measure following intervention for SR and considerations for how to measure the constructs. Guidelines can increase consistency across primary studies, with benefits for future meta-analyses and international comparisons. They also provide support for practitioners contemplating routine evaluation of their interventions for SR. Ultimately, a core outcome set for SR can be developed.

Keywords: school refusal, intervention, outcome, scoping review, guidelines, assessment, children, adolescents

INTRODUCTION

When a young person¹ is reluctant or refuses to attend school because of emotional distress, this is referred to as school refusal (SR; Heyne et al., 2019). The emotional distress may take various forms (e.g., excessive fearfulness, depressive affect, temper tantrums, unexplained physical symptoms), and the reluctance or refusal may result in late arrival, occasionally missing whole days, or missing consecutive weeks, months, or years (Heyne et al., 2019). Because SR is often associated with absence from school, it can negatively impact academic achievement

¹ We use the terms young people and youth to refer collectively to children and adolescents.

(Gottfried, 2014; Gershenson et al., 2017) and socioemotional outcomes (Malcolm et al., 2003; Gottfried, 2014). School absenteeism predicts school drop-out (Schoeneberger, 2012) which is predictive of unemployment (Attwood and Croll, 2006). It is suggested that SR can greatly impact a youth's quality of life (Torrens Armstrong et al., 2011) and that families are affected when a young person has difficulty going to school (Bryce and Baird, 1986). School absenteeism also places extra burden on school staff (Thornton et al., 2013; Balu and Ehrlich, 2018).

SR occurs among 1–7% of youth in the general population and 5–16% of youth seen in clinical settings (Egger et al., 2003; Heyne and King, 2004; Steinhausen et al., 2008; Havik et al., 2015). SR is a complex problem (Ollendick and King, 1998) associated with a broad range of interacting risk factors (Ingul et al., 2019) and there is a long history of research on SR (Heyne et al., 2019). Interventions have been developed within different disciplines (Heyne, 2006) and evaluated in randomized controlled trials, non-randomized trials, multiple baseline case series, and case studies (see Heyne et al., 2002; Pina et al., 2009; Maynard et al., 2018).

There is a great need to build the knowledge base around interventions for absenteeism (Heyne, 2019) and for SR more specifically (Elliott and Place, 2019). For example, in the field of SR there are questions about the benefits of combining psychosocial and pharmacological interventions (Melvin and Gordon, 2019), the effectiveness of alternative educational programs (Brouwer-Borghuis et al., 2019), ways to improve outcomes for socially anxious youth not helped by current interventions (Heyne et al., 2015), and the long-term effects of intervention (Elliott and Place, 2019). Rigorous evaluation of interventions is needed to answer such questions (Tonge and Silverman, 2019).

Building a meaningful evidence base for SR interventions requires that those who evaluate interventions carefully consider the constructs of interest when measuring outcome. There are lists of assessment instruments and procedures for school attendance problems (Inglés et al., 2015; Kearney, 2016) and SR (Heyne and Rollings, 2002; Ingul et al., 2019) but these lists provide researchers and practitioners with minimal guidance about which constructs are most important when evaluating intervention. Narrative reviews and a systematic review of interventions for SR signal constructs of potential interest, but those reviews are limited in scope. For example, the Maynard et al. (2018) systematic review and meta-analysis of psychosocial interventions for SR reported on post-treatment school attendance and youth anxiety while other outcomes were not evaluated. Pina et al.'s (2009) narrative synthesis of the efficacy of psychosocial interventions for SR covered a broader range of outcomes, including depression and disruptive behavior. However, their review and the narrative reviews of others (Elliott and Place, 2019; Melvin and Gordon, 2019) aimed to synthesize data on the effectiveness of SR interventions and not to identify the range of constructs measured as outcomes.

There has been little discussion about which outcomes to include in the evaluation of intervention for SR, unlike in other fields (e.g., social-emotional learning; Ura et al., 2019). It is thus not surprising that there are no guidelines for the

evaluation of intervention for SR comparable to those in other fields (e.g., outcome measures recommended for people with depression and anxiety; Obbarius et al., 2017). Guidelines can enhance the evidence base for SR interventions by ensuring that important constructs are measured, in a consistent way, benefitting comparisons across studies, including future meta-analyses. This, in turn, enhances clinical decision-making. Guidelines also enhance the efficiency with which researchers and practitioners can choose constructs to measure.

The aim of the current study was to support the development of guidelines for measuring outcome following intervention for SR. The primary research question was: Which constructs have been reported in studies evaluating intervention for SR? A secondary question was: How have these constructs been measured? We conducted a review of literature across the last 40 years, undertaking a scoping review rather than a systematic review and meta-analysis. First, scoping reviews are used for reconnaissance (Peters et al., 2015), undertaking a broad review to clarify concepts in a research area, report on the nature of research activity and types of evidence being gathered, and identify gaps (Arksey and O'Malley, 2005; Peters et al., 2015). Second, we did not seek to answer clearly defined questions typically addressed via systematic review and meta-analysis such as the effectiveness of treatment based on the quantitative synthesis of empirical evidence (Pham et al., 2014; Peters et al., 2015). Nor did we examine the methodological quality of included studies, a procedure reserved for systematic reviews (Tricco et al., 2018). Scoping reviews also differ from integrative reviews inasmuch as the latter may combine data from theoretical and empirical literature (Whittemore and Knafl, 2005) which was beyond the scope of the current study.

METHODS

Inclusion Criteria

Studies were eligible for inclusion if they met the following criteria: (1) Language: published in Danish, Dutch, English, Finnish, Norwegian, or Swedish, the languages in which the authors are fluent; (2) Year: published between 1980 and February 2019 inclusive; (3) Type: published in a peer-reviewed journal, excluding conference abstracts and letters to the editor; (4) Accessibility: for full-text screening, studies needed to be accessible online or in libraries accessible to one of the authors; (5) Design: any study evaluating intervention for SR² (except reviews, study protocols, publications about intervention to prevent the onset of SR, and studies only addressing the prediction of outcome), such as randomized controlled trials, quasi-experimental designs, single case studies, and follow-up studies (even if the follow-up sample was included in an earlier study); and (6) Population: youth in primary or secondary school,

²No attempt was made to select or classify SR interventions according to the tiered system introduced by Kearney and Graczyk (2014) whereby emerging SR (Tier 2) is differentiated from severe or chronic SR (Tier 3) because most studies to date have provided little or no information about the severity or chronicity of SR among youth in the study samples.

between 5 and 18 years, who displayed at least the first three SR criteria presented by Heyne et al. (2019) even if other terms had been used to refer to SR (e.g., school phobia, school refusal behavior). Exclusion of studies occurred according to the order of the criteria presented (e.g., if a study fulfilled criteria 1, 2, 3, and 4, but not criterion 5, it was not screened according to criterion 6).

Data Sources

A systematic search of 13 databases was conducted between January and February of 2019. Search terms were modified by author MB and a specialist librarian according to the database's thesaurus or subject terms (see **Appendix A**). The search yielded 6,437 publications: Academic Search Complete (1,188), Campbell Library (2), CENTRAL (272), Cinahl (672), Cochrane Database of Systematic Reviews (7), DARE (17), ERIC (319), HTA (3), PsycInfo (1,209), PubMed (1,245), Social Science Citation Index (1,238), Social Care Online (9), and SocIndex (256). This search of the 13 databases was supplemented by a search of the reference lists of published systematic reviews of intervention for SR, yielding another 17 publications. In line with the "snowball" technique (Pham et al., 2014) the authors identified 8 additional publications cited in publications already identified via the systematic search process. After removing duplicates, 3,213 publications were available for screening.

Screening

A three-step screening process was used to establish the relevance of the 3,213 publications. Consensus meetings involving all authors were held at each step to discuss and resolve conflicts.

At Step 1, publication title and abstract were reviewed according to the eligibility criteria specified above. Each publication was independently reviewed by two researchers, with all five authors working in changing pairs. When pairs were unsure whether selection criteria were met, an inclusive approach was employed whereby the publication was included for full-text review at Step 2. This approach was considered appropriate because of the long history of confused terminology in the field of SR, whereby terms other than "school refusal" have been used to describe the phenomenon (see **Table 1** in Heyne et al., 2019). For example, publications with titles or abstracts that referred to "anxiety and school attendance/absence" or "somatization and school attendance/absence" were included for screening at Step 2. At the conclusion of Step 1, 271 publications had been selected for full-text review. Rayyan (Ouzzani et al., 2016) is a web-based program to facilitate systematic reviews, and this was used to manage selection at Step 1.

At Step 2, full-text review, two researchers independently reviewed each publication, also conducted in changing pairs. Conflicts occurred for 31 of the 271 publications reviewed (11%) and these conflicts were resolved by consensus discussion. During Step 2 it became apparent that some publications used data from a sample reported in an earlier publication. Twenty publications were reviewed a second time and eight were excluded after consensus discussions between the authors (see **Appendix B**). For example, we excluded a publication that described the longer-term functioning of adults who had refused to attend school during their youth. The authors did

not state or imply that the aim of their follow-up was to evaluate *intervention* for SR (Flakierska-Praquin et al., 1997) thus failing to fulfill inclusion criterion 5. It seemed that the aim of their study was to report on longer-term functioning in a naturalistic follow-up.

At Step 3, 33 case-related publications were re-reviewed, this time by two authors working collaboratively (DH, RU). Step 3 was included because it became apparent during Step 2 that publications about case-related material differed considerably in the extent to which outcome was reported. For example, while some publications presented empirical single case studies with a clear focus on outcome (Hagopian and Slifer, 1993) others described real or hypothetical cases simply to illustrate a particular issue such as case conceptualization, while not evaluating the intervention (Hadi et al., 2014). Case-related publications were retained if the title, abstract, or introduction stated or implied that the aim of the study was to evaluate an intervention for SR. Nine of the 33 case-related publications

TABLE 1 | Characteristics of studies evaluating intervention for school refusal.

Characteristic	N (%)	Characteristic	N (%)
Publication year		Sample Size	
1980–1989	9 (18)	<10	27 (53)
1990–1999	15 ^{ab} (29)	10–49	15 ^{ab} (29)
2000–2009	14 ^b (27)	≥50	9 ^b (18)
2010–2019	13 (25)	Mean Age^d	
Country^c		6–9	6 ^b (15)
USA	19 ^{ab} (37)	10–14	29 ^{ab} (73)
Australia	10 ^b (20)	15–19	5 (13)
UK	7 (14)	Gender (% Male)	
Japan	5 (10)	≤33	10 (20)
Netherlands	3 (6)	34–66	23 ^{ab} (45)
India	2 (4)	≥67	15 (29)
China	1 (2)	Not specified	3 (6)
Finland	1 (2)	Intervention	
Singapore	1 (2)	Psychosocial (other than CBT)	13 (25)
Spain	1 (2)	CBT	12 ^b (24)
Sweden	1 (2)	Behavioral	10 (20)
Language		Not specified	4 (8)
English	51 (100)	Medication + other	4 (8)
Danish	0 (0)	CBT + psychosocial ^e	3 (6)
Dutch	0 (0)	Medication + CBT	2 ^b (4)
Finnish	0 (0)	Medication alone	2 ^a (4)
Norwegian	0 (0)	Virtual reality	1 (2)
Swedish	0 (0)		
Type of study			
Case study	24 (47)		
Group	19 (37)		
Follow-up only	8 (16)		

^aTwo studies were reported in one publication. ^bThe sample was reported in more than one publication. ^cBased on the location of the first author. ^dFollow-up studies were excluded. ^eChhabra and Puar (2016) employed psychosocial interventions alongside CBT, namely narrative therapy plus counseling with family, teachers, and peers. Last et al. (1998) compared CBT with an educational-support therapy. Tolin et al. (2009) employed CBT and other interventions as needed, such as motivational interviewing.

were excluded (see **Appendix C**). At the conclusion of Step 3, 50 publications were included for data extraction. At all steps, further duplicates were removed once identified.

Data Extraction

An Excel spreadsheet was developed (JS) to record data extracted from the selected publications. During a consensus meeting with all authors the spreadsheet was reviewed, and minor modifications were made. Data to be included in the spreadsheet were study characteristics (e.g., year of publication, country, type of study, type of intervention evaluated), instruments used to measure outcome, and methodological characteristics (e.g., informants, measurement time-points). All instruments used at post-treatment or follow-up were assumed to be measures of outcome, because studies did not consistently state the purpose of each instrument. Authors JS, KA, and DH independently extracted data for inclusion in the spreadsheet. Consensus meetings were used to resolve uncertainties.

Data Synthesis

The constructs that were measured following intervention were deduced from the titles of the instruments reported in the studies (authors DH, JS, RU). When unsure, authors conducted searches in Web of Science and Google to clarify the nature of the construct(s) measured via a particular instrument. Descriptive statistics (frequencies, percentages, means, standard deviations) were used to summarize the data.

RESULTS

Fifty publications met the inclusion criteria, one of which comprised two separate studies, yielding a total of 51 studies (see **Figure 1**).

Study Characteristics

Table 1 summarizes the characteristics of the 51 studies. Studies were conducted in the USA (37%), Europe (25%), Australia (20%), and Asia (18%), and almost half (47%) were case studies. There were 19 group-based studies (37%), comprising randomized controlled trials (18%), non-randomized controlled trials (4%), and single arm studies with pre-test and post-test but no control group (16%)³. Eight studies (16%) only reported follow-up. The mean number of youth per study type was 36 for group-based studies, 48 for follow-up studies, and 2 for case studies. Excluding follow-up studies, the age of the youth ranged between 6 and 18 years ($M = 12.7$; $SD = 2.4$). Across all studies, 55% of youth were males.

Collectively, cognitive behavioral therapy (CBT; 24% of studies) and behavioral intervention (20%) were the most common types of intervention. Other psychosocial interventions were evaluated in 25% of the studies, including multimodal treatment, Morita therapy, parent counseling, collage therapy, and hypnosis. Medication was evaluated as a stand-alone intervention (4% of studies), in conjunction with CBT (4%),

or in conjunction with other interventions (8%) such as individual psychotherapy for the child and casework with parents (Berney et al., 1981).

Constructs Measured as Outcome of Intervention

The constructs measured as outcome are found in **Table 2**. Among the 29 constructs, school attendance was the most common (73% of studies). Other relatively common constructs were anxiety (39%), depression (37%)⁴, emotional and behavioral symptoms (37%), global functioning (29%), fear (20%) and/or fear of school (16%), and self-efficacy (16%). Constructs measured infrequently included the function of the refusal to attend school (4%), self-esteem (4%), self-concept (2%), psychological well-being and stress (2%), quality of life (2%), and social adjustment (2%). All but two constructs pertained to characteristics of the young person, namely parent self-efficacy for managing school attendance problems, and parent desire for their child to return to school, measured via a single item.

Methods Employed to Measure the Constructs

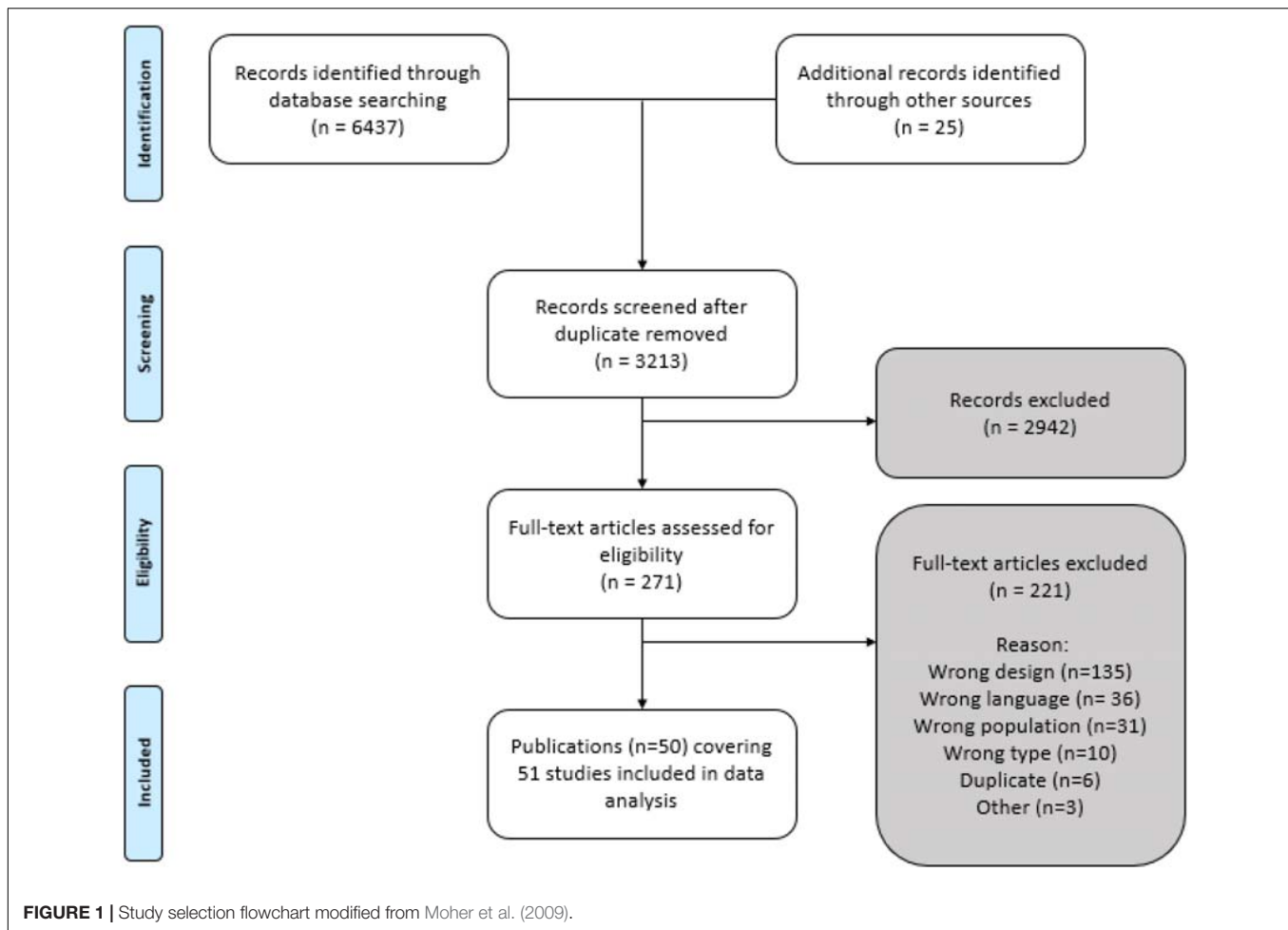
Table 2 also presents the instruments used to measure constructs. It should be noted that school attendance was not measured via a specific instrument *per se*. Moreover, while 37 studies (73%) included school attendance as an outcome measure, information about the process for gathering attendance data was provided in just 16 of the 51 studies (31%). Attendance was reported in a variety of ways, including the number of days or weeks absent, the percentage of time absent, or via qualitative descriptions (e.g., “at 6 months Rob was spending full days in school”; Phillips and Wolpe, 1981).

The other 28 constructs were measured in many different ways. Across the 51 studies we identified 57 instruments used to measure outcome, the most common being the Child Behavior Checklist (Achenbach, 1991a) in 29% of studies, Children's Depression Inventory (Kovacs, 1992) in 27%, Children's Manifest Anxiety Scale or its revision (CMAS, RCMAS; Reynolds and Richmond, 1985; Reynolds and Richmond, 2008) in 24%, Fear Survey Schedule for Children (FSSC; Ollendick, 1983) in 18%, Self-Efficacy Questionnaire for School Situations (Heyne et al., 1998) in 16%, School Fear Thermometer (Heyne and Rollings, 2002) in 14%, and Global Assessment of Functioning Scale (GAF; American Psychiatric Association, 1994) in 14%.

Table 3 summarizes the methods, informants, and time-points employed across the 51 studies. Excluding the gathering of attendance data, the most common data gathering methods were questionnaires (59%), clinician rating scales (35%), various types of interviews which were not described as diagnostic interviews (33%), other unspecified rating scales (24%), and interviews described as having a diagnostic purpose (16%). These diagnostic interviews were usually structured [e.g., Anxiety Disorders Interview Schedule for Children (ADIS-C/P); Silverman and Albano, 1996] but in one case an unstructured diagnostic

³This totals to 38% due to rounding.

⁴Three other studies (6%) measured both anxiety and depression with a single instrument.



interview was used (Hagopian and Slifer, 1993). Just one study, a case study (Conoley, 1987), employed an observational method to collect data, whereby a teacher observed the child in the classroom. In another case study the young person and parent were instructed to keep a diary (Chorpita et al., 1996).

With respect to informants, some studies used a multi-informant approach by eliciting information about outcome from two informants (20% of studies), three informants (25%), or four informants (6%). Respondents were youth in less than two-thirds of studies (61%), parents in less than one-half of studies (43%), and clinicians in just over one-third of studies (35%). In only nine studies (18%) did teachers or other school personnel report on outcome.

There was considerable variability in the time-points for measuring outcome. Of the 43 group-based studies and case studies (i.e., excluding the 8 studies that were solely follow-up studies), 17 (40%; 8 group-based studies and 9 case studies) involved at least three time-points for gathering data related to outcome: pre-intervention, post-intervention, and follow-up. Eleven of the 43 studies (26%) measured outcome at two time-points (pre-intervention and either post-intervention or another time-point), seven studies (16%; all case studies) included daily or weekly data gathering, and seven studies (16%; all case studies)

did not specify the time-points for measuring outcome. The eight follow-up studies, by their very nature, included measurement at some point after intervention ended, ranging from 1 to 20 years. Length of follow-up was 1–5 years in three studies (38% of follow-up studies), 6–15 years in four studies (50%), and 15–20 years in one study (12%).

DISCUSSION

This is the first review of constructs measured following intervention for SR. Fifty-one studies met inclusion criteria: 9 studies published in the 1980s and 13–15 studies per decade across the last three decades. We discuss the constructs measured in the 51 studies, the way in which they were measured, and the strengths and limitations of the current study. Thereafter we offer guidelines for evaluating outcome following intervention for SR.

Constructs Measured as Outcomes of Intervention

We identified 29 constructs measured as outcomes. Unsurprisingly, the construct measured most often was school attendance. Other constructs measured with moderate

TABLE 2 | Constructs measured after intervention for school refusal and instruments used to measure the constructs.

	Group N = 19	FU N = 8	CS N = 24	Total N = 51
School attendance	16	3	18	37
Anxiety	12	2	6	20
Children's Manifest Anxiety Scale (CMAS/RCMAS)	7	0	5	12
State-Trait Anxiety Inventory (STAI/STAI-C)	3	1	2	6
Multidimensional Anxiety Scale for Children (MASC)	2	0	2	4
Anxiety Rating for Children (ARC/ARC-R)	2	1	0	3
Social Anxiety Scale for Children (SASC/SASC-R)	1	0	1	2
Self-Rating Anxiety Scale (SAS)	1	0	0	1
Depression	10	2	7	19
Children's Depression Inventory (CDI)	8	0	6	14
Children's Depression Rating Scale (CDRS/CDRS-R)	2	1	0	3
Beck Depression Inventory (BDI)	1	0	1	2
Self-rating Depression Scale (SDS)	1	0	1	2
Zung Depression scale	0	1	0	1
Emotional and behavioral symptoms	9	2	8	19
Child Behavior Checklist (CBCL)	7	1	7	15
Teacher's Report Form (TRF)	3	0	3	6
Youth Self-Report (YSR)	1	0	1	2
Achenbach Young Adult Self-Report (YASR)	0	1	0	1
Devereux Behavior Rating Scales–School Form	0	0	1	1
Rutter Behavior Rating Scales (RBRS)	1	0	0	1
Strengths and Difficulties Questionnaire (SDQ)	1	0	0	1
Young Adult Behavior Checklist (YABCL)	0	1	0	1
Global functioning	10	1	4	15
Global Assessment of Functioning Scale (GAF)	6	0	1	7
Children's Global Assessment Scale (CGAS)	4	0	0	4
Clinical Global Impression (CGI)	2	0	2	4
Subjective Units of Distress (SUDS)	1	0	1	2
Comprehensive Psychopathology Rating Scale (CPRS)	0	1	0	1
Fear	7	1	2	10
Fear Survey Schedule for Children (FSSC-2/FSSC-R)	7	0	2	9
Fear Questionnaire	0	1	0	1
Fear of going to school / school-related fear	5	0	3	8
School Fear Thermometer (SFT)	4	0	3	7
School-Related Fears Inventory ^a (IME)	1	0	0	1
Self-efficacy for school-related situations	5	0	3	8
Self-efficacy Questionnaire for School Situations (SEQ-SS)	5	0	3	8
Diagnosis	5	1^b	2	8^b
Anxiety Disorders Interview Schedule for Children (ADIS-C/P)	3	0	1	4
Diagnostic Interview for Children and Adolescents – Revised (DICA-R)	0	1	0	1
Diagnostic Interview Schedule for Children (NIMH DISC 2.3)	0	1	0	1
Missouri Assessment of Genetics Interview for Children (MAGIC)	1	0	0	1
Schedule for Affective Disorders and Schizophrenia for School-Age Children (K-SADS-P)	1	0	0	1
Unspecified diagnostic interview	0	0	1	1
Anxiety and depression^c	0	2	1	3
Leeds Anxiety and Depression Scale	0	2	0	2
Revised Child Anxiety and Depression Scale (RCIDAS)	0	0	1	1
Adverse effects of medication	1	0	1	2
New York state psychiatric institute side effect form	1	0	0	1
UKU-scales (side-effects)	0	0	1	1
Function of refusal to go to school	1	0	1	2
School Refusal Assessment Scale (SRAS)	1	0	1	2

(Continued)

TABLE 2 | Continued

	Group N = 19	FU N = 8	CS N = 24	Total N = 51
Outcome of services – general health, social functioning	2	0	0	2
Health of the Nation Outcomes Scales Child and Adolescent (HoNOSCA)	2	0	0	2
Self-esteem	1	1	0	2
Rosenberg Self Esteem Scale	0	1	0	1
Self-esteem Inventory	1	0	0	1
Severity of diagnosis	0	0	2	2
Clinical Severity Rating (part of ADIS)	0	0	2	2
Cognitive and behavioral dimensions in motivation and engagement	1	0	0	1
Motivation and Engagement Scale – High School version (MES-HS)	1	0	0	1
Consumer satisfaction + parent/adolescent desire for school return	1	0	0	1
School Refusal Program Consumer Satisfaction Questionnaire (SRP-CSQ)	1	0	0	1
Daily hassles	0	0	1	1
Daily Life Stressors Scale (DLSS)	0	0	1	1
Dimensions of personality	1	0	0	1
Junior Eysenck Personality Questionnaire (JEPQ)	1	0	0	1
Mental health	0	1	0	1
General Health Questionnaire (GHQ 30)	0	1	0	1
Overall improvement since start of intervention	1	0	0	1
Global Improvement Scale	1	0	0	1
Parent self-efficacy for managing school attendance problems	1	0	0	1
Self-efficacy Questionnaire for Responding to School Attendance Problems (SEQ-RSAP)	1	0	0	1
Personal functioning	1	0	0	1
Personal Performance Scale (PPS)	1	0	0	1
Psychological well-being and stress	1	0	0	1
General Well-being Scale	1	0	0	1
Psychopathology (dimensional)	0	1	0	1
Maudsley Symptom Checklist	0	1	0	1
Quality of life	1	0	0	1
KIDSCREEN-27	1	0	0	1
Reading ability	1	0	0	1
Burt Reading Test (BRT)	1	0	0	1
Self-concept (intrapersonal competence)	0	0	1	1
Piers-Harris Self-concept Scale (P-H)	0	0	1	1
Social adjustment	0	1	0	1
Social Adjustment Scale	0	1	0	1

FU, Follow up; CS, Case study. ^aThe Spanish title, reported in an English-language publication, is *Inventario de Miedos Escolares (IME)*. ^bOne follow-up study used two different diagnostic interviews. ^cThe constructs “anxiety” and “depression” were measured via a single instrument.

frequency were emotional and behavioral symptoms (including anxiety, fear, school-related fear, and depression), self-efficacy, and global functioning.

School Attendance

School attendance is a pivotal measure of outcome following intervention for SR (King et al., 1998) described as a “gold standard” because it provides a real-world referent in ways that psychological rating scales do not (Tonge and Silverman, 2019). This seems to explain why school attendance was the most commonly measured construct.

It is logical that five of the eight follow-up studies did not measure attendance because many participants would have been older than school-age at the time data was gathered.

However, one quarter of the case studies did not include school attendance as an outcome even though youth in these studies were aged 6–18 years, so most were probably of school-going age when intervention was completed. Case studies may sometimes be authored by practitioners who find it more difficult to retrieve school attendance data than do research teams that have assistants to contact or visit schools to collect data.

In Maeda’s (2017) case study, attendance data was supplemented with peri-attendance information about the need for parents to escort the young person to school, probably because the therapy evaluated was Morita therapy which involves parents escorting their child to school. Maeda’s study signals the importance of not only determining whether a young person is at school but also how much or little effort

TABLE 3 | Methodological characteristics of studies evaluating outcome of intervention for school refusal.

	Group N = 19	FU N = 8	CS N = 24	Total N = 51
Measurement method				
School attendance data	16	3	18	37
Questionnaire	16	5	9	30
Rating scale – clinician	12	2	4	18
Interview – other ^a	7	6	4	17
Rating scale – other ^b	6	0	6	12
Interview – diagnostic	5	1	2	8
Review of medical record	2	3	0	5
Other	3	1	1	4
Diary	0	0	1	1
Observation	0	0	1	1
Test	1	0	0	1
Informants				
Youth	17	5	9	31
Parent	11	2	9	22
Clinician	13	2	3	18
School personnel ^c	4	2	3	9
Time-points				
Pre-post and follow up	8	0	9	17
Only follow up	1	8	0	9
Daily/weekly	0	0	7	7
Not specified	0	0	7	7
Pre-post	5	0	1	6
Pre + after certain time ^d	5	0	0	5

^aThese interviews were not clearly for diagnostic purposes and were simply described as a structured or unstructured interview, clinical interview, telephone interview, etcetera. ^bRater by informant other than clinician (e.g., youth). Teachers or school counselors. ^cMeasurement at pre-intervention and then another time-point (e.g., after 4 and 8 weeks) which is not post-intervention.

is required – by the young person, parents⁵, and school staff – to ensure the young person is at school. Berney et al. (1981) also assessed ability to attend school, taking account of the need for parent escorting, although they noted that information was limited to arrival at school “and does not take into consideration what happens subsequent to that” (p. 112). Mansdorf and Lukens (1987) reported the percent of time two youths displaying SR could remain in school with the parent and alone, during intervention and at 3-month follow-up.

Emotional Symptoms

Across the four decades pertinent to this study, definitions of SR have consistently specified the presence of emotional distress (Atkinson et al., 1985; Last et al., 1998; Bernstein et al., 2000; Heyne et al., 2011). It is thus not surprising that, apart from school attendance, the constructs most commonly measured relate to emotional distress (i.e., anxiety, fear, school-related fear, depression, anxiety and depression, and emotional and behavioral symptoms). The two instruments most commonly used to measure anxiety were the CMAS/RCMAS and the State-Trait Anxiety Inventory and its child version (Spielberger et al., 1973). The more recent Multidimensional Anxiety Scale for

Children (March et al., 1997) was used in 4 studies and no studies used the Screen for Child Anxiety Related Emotional Disorders (SCARED, Birmaher et al., 1999). Fear was almost always measured with the FSSC or its revision, and fear of school almost always with the SFT. Almost three-quarters of studies measuring depression used the CDI. Emotional and behavioral symptoms were most commonly measured via the CBCL for parent report and the Teacher’s Report Form (Achenbach, 1991b) for teacher report. The Youth Self-Report (Achenbach, 1991c) was only used in two studies, perhaps because of its length.

Behavioral Symptoms

Because definitions of SR emphasize emotional distress and specify the absence of severe antisocial behavior, it may seem unsurprising that a little more than one-third of studies measured both emotional *and* behavioral symptoms. However, disorder-level oppositional behavior is reported among 21–44% of youth referred for SR (Heyne et al., 2015) suggesting the importance of measuring oppositional behavior.

Self-Efficacy

Youth self-efficacy was measured in 16% of studies, all of which were evaluations of CBT for SR. In each study it was measured as a situation-specific construct via the SEQ-SS, not as a general self-efficacy construct. The SEQ-SS measures a young person’s

⁵We use the term “parents” to refer to parents and/or other caregivers.

perception of their ability to cope with school-related situations such as doing school-work, being away from parents, and answering questions about absence. It has been suggested that low self-efficacy for responding to school situations poses a risk for SR and, conversely, high self-efficacy may help explain school attendance even when a young person faces difficult situations at school (Ingul et al., 2019).

One study measured parent self-efficacy using the relatively recent Self-Efficacy Questionnaire for Responding to School Attendance Problems (SEQ-RSAP; Heyne et al., 2007). The study revealed a significant increase in parent self-efficacy following a CBT intervention which included parents (Heyne et al., 2011) providing initial support for measuring the construct of parent self-efficacy when intervention is conducted with parents.

Global Functioning, Mental Health, and Diagnosis

Less than one-third of studies measured youths' global functioning as an outcome, most commonly via the GAF. Mental health is a similarly broad construct, and it was measured in two studies. In four studies the diagnostic status of emotional distress was assessed via the ADIS-C/P, and only four other studies used a diagnostic interview schedule to measure outcome. We observed that a focus on overall adjustment was less typical of case studies than group-based studies. Those conducting group-based studies are typically from research settings where global functioning and diagnosis are commonly assessed.

Combinations of Constructs

One study combined outcomes related to attendance and diagnosis to determine the proportion of youth no longer fulfilling operational criteria for SR. Specifically, Heyne et al. (2011) reported that, subsequent to intervention, 55% of youth attended school more than 80% of the time *and* no longer had a diagnosable level of anxiety. This seems to be the first effort to conceptualize outcome as the absence of multiple SR criteria.

Constructs Seldom Studied

We could expect that authors measure particular constructs following intervention because those constructs reflect the goals of the intervention. Similarly, constructs measured during intervention and at the end of intervention could be expected to reflect an author's theory of change. However, during full-text review of studies we noticed that few authors presented a rationale for measuring the constructs embodied in the instruments they used. More often, authors presented a rationale for choosing a specific instrument (e.g., its psychometric properties; suitability for a specific age group). It is thus unclear from this review whether the lack of attention to specific constructs should be interpreted as intentional (e.g., the author believed that the construct was not important enough to be included in a lengthy assessment battery) or unintentional (e.g., the author overlooked the importance of a construct).

We identified numerous constructs that were seldom measured. In some instances, the lack of attention to a construct is understandable. For example, only two studies used the School

Refusal Assessment Scale (Kearney and Silverman, 1993) or its revision (Kearney, 2002b) to measure outcome. This instrument was designed to facilitate intervention planning by indicating the function of the refusal to attend school; it was not designed as a measure of outcome. Only two studies measured self-esteem and one study measured self-concept. This might be explained in part by the fact that a large number of studies included in our review evaluated CBT or behavioral intervention. Traditionally, interventions using CBT-based theory and techniques were not focused on raising levels of self-esteem, and if measured, self-esteem was a secondary outcome rather than primary outcome (Kolubinski et al., 2018).

The lack of attention to other constructs is more surprising. Only one study used an instrument focused on social adjustment despite the fact that this construct is linked to SR historically (Buitelaar et al., 1994; Place et al., 2002; Egger et al., 2003) and recently (Ingul and Nordahl, 2013; Blöte et al., 2015; Heyne et al., 2015). We found indirect measurement of social adjustment via global ratings of functioning (e.g., the GAF), a single broad item rated by youth, parents, or clinicians [e.g., "peer relationships" in the HoNOSCA (Gowers et al., 1999)] and questionnaires which simultaneously measured a broad range of constructs (e.g., the CBCL includes a subscale for social problems). However, data from instruments such as the CBCL were usually reported at the broad-band level (i.e., internalizing behavior and externalizing behavior).

No studies measured family functioning as an outcome despite the fact that one-half to two-thirds of families of youth who display SR exhibit maladaptive family functioning, and CBT manuals for SR commonly include family-related work on communication and problem-solving (Heyne et al., 2015). In Bernstein et al. (2001) 1-year naturalistic follow-up study, the Family Adaptability and Cohesion Evaluation Scale II (FACES II; Olson et al., 1982) was used to measure cohesion, adaptability, and family type (balanced to extreme), but only as a predictor of outcome at follow-up.

Only two parent-related constructs were measured as outcomes: self-efficacy in one study, and desire for the child to return to school in another study. Measures of parenting styles and dimensions were not included in any studies, despite the potential impact of parenting on the outcomes of intervention for SR (Heyne et al., 2015). Prabhuswamy et al. (2007) presented pre-intervention data on psychosocial factors such as parental overindulgence and overprotection, but these constructs were not measured post-intervention. Furthermore, no studies reported on parent psychopathology despite the fact that it is often observed in the parents of youth displaying SR (Heyne et al., 2015).

In two recent studies of alternative educational settings for youth displaying SR, authors included positively-oriented constructs. Preece and Howley (2018) noted that staff in an intervention facility for youth unable to attend mainstream school regarded youths' well-being as essential for re-engagement with formal education, and the General Well-Being Scale (Heubeck and Neill, 2000) was used to monitor youth-reported progress in well-being. McKay-Brown et al. (2019)

argued that professionals' attention to youths' quality of life, in the context of a wraparound model of care, could enhance SR interventions. Quality of life was measured as an outcome via youth and parent reports on the KIDSCREEN-27 (Kidscreen Group Europe, 2006) which assesses youths' health and well-being.

How the Constructs Were Measured

The gathering and reporting of attendance data varied considerably. For example, data was derived via parents' weekly reports of the number of hours in school (Bernstein et al., 2000) and daily records of attendance kept by teachers (King et al., 1998). Many authors did not specify the source of attendance data so readers cannot assess the reliability of outcomes based on that data. There was also variability in the way attendance data was reported, such as the number of days or weeks youth were absent; the percentage of absence in a period of time (e.g., across 2 weeks; across 4 weeks); achievement of a specific level of school attendance (e.g., at least 80 or 90%); and descriptions such as "at 6 months Rob was spending full days in school" (Phillips and Wolpe, 1981).

Across all constructs, respondents were youth in less than two-thirds of studies, parents in less than one-half of studies, clinicians in just over one-third of studies, and teachers in under one-fifth of studies. Differences emerge when analyzing the data according to study type. For example, while 17 of the 19 group-based studies (89%) elicited youth report, only 9 of the 24 case studies (38%) did so. It is possible that youth had been consulted during outcome evaluation in case studies, but a failure to specify the instrument(s) used to measure outcome led to an underestimation in the current study of the extent to which youth were the informants on outcomes. For example, Hargrett and Webster (1996) reported that a young person's adjustment was monitored over 7 months and that there were no signs of SR, but there was no specification of the data source.

School attendance data aside, the most common methods for data gathering were questionnaires, rating scales completed by clinicians or others, and some form of interview whether for diagnostic or other purposes. We assume questionnaires were regularly used because they are easy to administer, score, and interpret. Even though interviews provide rich qualitative information about the lived experiences of participants, which is important for the development of evidence-based practice (American Psychological Association, 2006), quantitative information grants the most efficient method for comparing results across studies. Just one study used an observational method to gather data following intervention, and just one used a daily diary, despite the recommendation that observations and diaries be used in the assessment of SR (Ollendick and King, 1998).

The time-points for measuring outcome were varied, especially among the group-based studies. The impression we gained during full-text review is that authors rarely if ever justified the time-points they used, so it is difficult to explain the variability. Hargrett and Webster (1996) used an ongoing approach to measure outcome, collecting bi-weekly data for 7 months until the end of the school year, and then for the

first 2 months of the next school year. This ongoing approach to measurement – albeit easier to conduct in a single case study relative to a group-based study – enabled the authors to demonstrate ongoing efficacy of the intervention, including no relapse back to refusal to attend school or an inability to stay at school after arrival.

Strengths and Limitations

The scoping review method employed in the current study helped clarify which constructs have been measured as outcomes following SR intervention. We conducted a broad search across four decades, five languages, and various study types (group, case, and follow-up studies). The inclusion of case studies strengthens the relevance of this review for practice-based settings, beyond its relevance for research-based settings.

Unpublished studies were not included, which may have limited the range of constructs identified. At the same time, by restricting our search to peer-reviewed publications we incorporated a crude quality assessment check on the included studies. There was no further assessment of study quality because the aim was to review existing literature according to constructs and methods for measuring constructs, and not to synthesize evidence about intervention effectiveness (Pham et al., 2014).

As is typical of reviews, judgment was used to determine whether studies should be included or excluded. In our review, this included judgment about whether or not case studies met the additional inclusion criterion (i.e., "stated or implied intention to evaluate outcome"), and judgment about which constructs were being measured by the instruments used to evaluate outcome. The latter was necessary because the authors of studies rarely specified which constructs they intended to measure. Judgments were made in pairs, and if there was doubt the research team met for a consensus discussion.

We observed that the SR criteria reported in some studies were unclear. We thus excluded some studies that may well have been evaluations of intervention for SR. To assist future reviews, authors should specify which criteria for SR were (not) applicable to the youth in their study.

It was beyond the scope of this study to review the psychometric properties of the instruments identified across the 51 studies. A review of this kind will benefit decision-making about how best to measure constructs of interest. Existing reviews that contain reliability and validity information about instruments used to measure constructs such as "school engagement" (Fredricks and McColskey, 2012) could be used to guide a review of the psychometric properties of instruments used to measure the constructs included in the guidelines that follow.

Recommendations

Following, we offer guidelines for measuring outcome following interventions for SR. Greater standardization of outcome measurement – which constructs are measured and how they are measured – facilitates comparison of outcomes across studies and the synthesis of data via meta-analysis. Ultimately, consumers of SR interventions benefit from greater standardization. That is, standardization enhances the accumulation of evidence about

the relative benefits of different options for intervention, and practitioners and researchers are more likely to measure and report outcomes that are important to the users of their research (Chu et al., 2015; Kirkham et al., 2016). Guidelines also aid efficiency in decision-making about outcome evaluation. For busy practitioners, this may increase the likelihood that they routinely evaluate progress so as to determine when and how the “scaffolding of support” to youth, families, and schools can be reduced.

Guidelines for Choosing Constructs

According to Ollendick and King (1998) professionals often gathered information in certain ways simply because those ways were convenient. We contend that the choice of outcome constructs should be based on the relevance of the constructs to the goals of intervention and not influenced by convenience or habit (e.g., using an instrument because it is familiar).

If a researcher's or practitioner's goal is to “simply” help youth return to school (which is seldom a simple process), it might seem logical to limit outcome constructs to school attendance. However, SR is heterogeneous in its etiology and presentation (Heyne and Sauter, 2013; Gallé-Tessonau and Heyne, 2020) as well as its impact, so intervention should focus on improving broader outcomes for youth, necessitating a wider palette of outcome constructs. In other words, the goals of intervention are likely to include general goals (e.g., increased school attendance) and specific goals informed by case formulation (e.g., increased social involvement).

Assuming researchers and practitioners choose to measure multiple outcomes, which should they be? In a review of SR intervention, Elliott and Place (2019) noted: “Researchers, therefore, need to be explicit about whether the primary outcome sought in their intervention studies is reduction in anxiety or increased school attendance.” Based on the findings in our review and our own reflections on the goals of intervention, we propose that evaluation of outcome includes – but also extends beyond – the constructs of school attendance and anxiety. If we assume that the constructs measured in the 51 studies reviewed here were chosen because they reflected the goals of the interventions offered and not because of convenience or habit, then researchers and practitioners are well advised to measure the more common constructs identified in the current study: school attendance; emotional functioning including anxiety, fear/fear of school, and depression; behavioral symptoms; global functioning; and self-efficacy.

School attendance is an important foundational competency for youth (Kearney et al., 2019a) and a gold-standard, real-world referent for evaluating interventions for school attendance problems (Tonge and Silverman, 2019). It is self-evident that it would be included in evaluations of SR. As noted in section “School Attendance,” peri-attendance variables are also relevant. A smartphone application could be developed to facilitate ecological momentary assessment of variables beyond school attendance and absence, such as the young person's whereabouts (e.g., in class or often in the school nurse's office), how much time parents spend at school with a separation anxious youth

participating in intervention for SR, and the youth's emotional distress during the school day.

Emotional functioning includes the youth's levels of fear, anxiety, and depression. Alongside general levels of emotional distress, researchers and practitioners may measure distress experienced within the school setting. Three relatively recent instruments not yet incorporated in outcome studies have face validity for SR intervention: the School Anxiety Scale–Teacher Report (Lyneham et al., 2008), the School Anxiety Inventory⁶ (SAI; García-Fernández et al., 2011) and its short version (García-Fernández et al., 2014), and the SChool REfusal EvaluationN Scale (SCREEN; Gallé-Tessonau and Gana, 2019). These provide more detailed information about youths' emotional distress in the school context relative to instruments such as the MASC and its revision (MASC-2; March, 2013), the Revised Children's Manifest Anxiety Scale (Reynolds and Richmond, 1985) and its revision (RCMAS-2; Reynolds and Richmond, 2008), and the Spence Children's Anxiety Scale (Spence, 1998). The SCARED has a 4-item school phobia subscale but the subscale does not always emerge in analyses of the instrument's factor structure (Inglés et al., 2015). Because psychosomatic symptoms are also prominent in cases of SR (Heyne et al., 2015) they should be measured alongside the other constructs associated with emotional distress.

Measures of behavioral symptoms can provide an indication of the frequency and severity of a young person's resistance to school attendance. Parents can be asked to complete a daily logbook that includes ratings of noncompliance and disruption (Kearney and Albano, 2000) and more specifically the child's resistance to efforts to get them to go to school (Kurita, 1991). Anecdotal evidence suggests that the decrease in a young person's resistance to school attendance is a very important outcome for parents who are often emotionally and physically exhausted due to resistive behaviors often directed at them.

Global functioning provides a measure of overall outcome following SR intervention. It was infrequently incorporated in case studies included in this review. To benchmark global functioning of youth included in case studies against those included in group-based studies, authors preparing case studies will need to incorporate a measure of global functioning. The most common measure of global functioning was the clinician-rated GAF, which includes assessment of the impact of symptoms on daily life. It is important to also obtain youth, parent, and teacher perspectives on global functioning, perhaps via the impact supplement of the Strengths and Difficulties Questionnaire (Goodman, 1999).

Youth self-efficacy and parent self-efficacy are cognitive constructs relevant to outcome because they are a key target for change during CBT for SR and they have been found to increase following intervention (Heyne et al., 2015). Non-CBT interventions may also have a positive effect on school attendance due to youths' increased self-efficacy for attending school and/or parents' increased self-efficacy for responding to a child's refusal

⁶This is an updated version of the *Inventario de Miedos Escolares (IME)* presented in Table 2. The IME only assesses anxiety-generating situations whereas the SAI also assesses the three anxiety response systems (cognitive, physiological, and motor or behavioral).

to attend. As such, it is valuable to include youth and parent measures of self-efficacy in the evaluation of CBT and non-CBT interventions. Furthermore, higher levels of self-efficacy at post-intervention may help prevent relapse during a follow-up period because youth and/or parents are more likely to engage in adaptive behaviors during those times when there are small setbacks.

Other constructs found to be less common or not measured at all also warrant attention. Following, we draw attention to constructs relevant to the young person's adjustment; motivation for change; family functioning; and side effects of intervention. We conclude this section with attention to individualized goals as constructs of interest, and variation in the constructs of interest according to the length of follow-up conducted.

An important facet of the young person's adjustment is their social adjustment (see section "Constructs Seldom Studied"). An instrument measuring this construct should be used, or at the very least authors should report outcome according to sub-scales that measure social functioning (e.g., "social problems" in the CBCL). We also encourage researchers and practitioners to measure well-being as a broader youth-focused construct, reflecting a holistic perspective on the success of intervention. School engagement is an important construct because of the potential for relapse if there is little school engagement following return to school. McKay-Brown et al. (2019) used the Motivation and Engagement Scale (Martin, 2014) to measure "educational functioning," noting that the instrument measures adaptive and maladaptive factors related to learning behaviors "that are linked to school engagement" (p. 96). According to Amai (2020) a related construct of "sense of school adaptation" has been widely measured in Japan using Furuichi and Tamaki's (1994) School Adaptation Scale (e.g., I look forward to going to school; I want to go to school even if I feel a little bad). Other youth-focused constructs that appear to be associated with SR but have not been measured as outcomes include emotion regulation (Hughes et al., 2010) and negative automatic thoughts and thinking styles (Maric et al., 2012). Academic functioning is an important construct when evaluating interventions for absenteeism (Tonge and Silverman, 2019), including SR.

Parent and youth motivation for achieving school return was measured in just one study via a single item about desire for return to school (Melvin et al., 2017). Readiness for change is found to be related to outcome in studies of psychotherapy with adults and adolescents (Krebs et al., 2018) and seems important for understanding treatment progress among depressed adolescents (Rodriguez-Quintana and Lewis, 2019). It should receive more attention in studies of intervention for SR, with measurements at pre-intervention, mid-intervention, and post-intervention, as recommended by Rodriguez-Quintana and Lewis (2019) in relation to adolescent depression.

A systemic perspective on SR and interventions for SR calls for measurement of parenting and family functioning (see section "Constructs Seldom Studied"). Measuring these constructs during intervention, at post-intervention, and at follow-ups will allow us to establish the extent of change in functioning as well as the extent to which change in parent and family functioning is associated with change in school

attendance and other outcomes for youth. As noted, no studies included in the current review addressed these constructs. If the word-limit restrictions of journals lead authors to exclude data about parent and family functioning, such information should be included in supplementary online materials or adjunct publications so that the evidence base for changes in these constructs grows.

A few studies of pharmacological intervention measured adverse effects, and some studies of psychosocial intervention measured the experience of intervention. In Head and Jamieson's (2006) study, which was excluded from our review⁷, the focus of enquiry was broadened from "technical success" in terms of school attendance to whether and why youth, parents, and teachers regarded intervention as successful. Maeda (2012) provided a qualitative account of the impact of intervention (forced school attendance) on the parents: "Thus, intensive exposure therapy for school return could be a burden to children, parents, and school officials in spite of being effective for school return" (p. 309). Information about the experience of intervention may impact consumer uptake and persistence with intervention. Just one study included in our review reported on consumer satisfaction as an outcome. Consumer satisfaction warrants inclusion in all reports on outcome because it provides information that can help shape interventions in ways that enhance uptake, persistence, and outcome.

Individualized goals for intervention constitute important constructs to be measured. In Meyer et al. (1999) case study, "progress toward goals" was measured according to youth and parent behaviors. This approach to conceptualizing change may have been used because the young person had an intellectual disability. Nonetheless, it presents a model for all practitioners evaluating interventions, and where possible, for the evaluation of outcome in group-based studies. Another example of attention to specific goals is found in the work of Kearney and Silverman (1990). They used a standard set of outcome measures across seven cases but they expected differences on the measures per case, depending on the function served by each youth's refusal to attend school. It was suggested that "perhaps a more appropriate way to examine the data is to focus primarily on those measures that are pertinent to each functional category" (p. 354). Indeed, goal-based outcomes derived from youth and parent goals for intervention should be considered for inclusion in a battery of outcome measures (Law and Jacob, 2015).

The constructs of interest will also vary according to the length of follow-up being conducted. For example, in Flakierska et al. (1988) 15- to 20-year follow-up study of adults who had refused to attend school as youth, constructs included the number of visits to adult outpatient psychiatric care and the number of children they had. Clearly, longer follow-ups call for broader conceptualization of the constructs of interest.

Whichever constructs are measured, authors need to provide a clear rationale for choosing those constructs. This is in contrast to what we observed during the current review. For example,

⁷The study did not meet inclusion criterion 5; it was not an evaluation of intervention but a report on the experience of intervention.

interviews were used in many studies, presumably to measure diagnosis or global functioning, but a clear explanation for why an interview was used was not always included. Our observation that authors often neglected to specify the constructs of interest reflects an unfortunate long-standing phenomenon. Even in the 1980s Valles and Oddy (1984) noted that “measures of outcome are ill-defined” (p. 36). When the specification of constructs of interest becomes standard practice, authors are prompted to reflect on the goals they have for their intervention. Specification of constructs will also benefit future reviews of the effectiveness of interventions for SR. First, it will expedite the selection of primary studies for systematic review because the outcomes of interest are clearly specified in the primary studies. Second, it can facilitate the interpretation of outcomes from meta-analyses. For example, effect sizes might differ between primary studies because of differences in the conceptualization and operationalization of outcome, whereby some measured constructs may be more sensitive to change than others.

Guidelines for Measuring Constructs

To advance the evidence base for SR interventions, careful consideration needs to be given to the methods for measuring chosen constructs. First, consistency in the choice of instrument or procedure to measure a construct such as school attendance will facilitate the comparison of outcomes across schools, school districts, and states (Hobbs et al., 2018), as well as across countries. For example, Fredricks and McColskey (2012) noted large variation in how constructs were measured in the field of school engagement, making it difficult to compare findings across studies. Second, when other methodological issues are consistent across studies, such as choice of informants and measurement time-points, then the interpretation of comparative results will be simplified. For example, Melvin and Gordon (2019) conducted a review of antidepressant medication for SR and suggested that study differences in the source of information (e.g., school versus parent) and the timing of assessment created measurement error variance which could explain the apparent lack of benefit when combining medication with CBT for SR. Third, greater consistency in how outcome data is reported will enhance data synthesis such as meta-analysis. In a meta-analysis of the relationship between anxiety and school attendance problems, Finning et al. (2019) concluded that methodological differences across studies limited scope for combining studies. Their study was not a meta-analysis of outcome, but the challenges they experienced in synthesizing data across studies would apply equally to meta-analyses of outcome following intervention for SR.

Following, we discuss six topics relevant to promoting consistency in the evaluation of outcome: accessing valid data on school attendance; using psychometrically sound instruments to measure other constructs; establishing uniformity in the choice of psychometrically sound instruments; establishing uniformity in time-points for measurement; specifying criteria for determining when desired outcome has been achieved; and incorporating various sources of data.

First, those who evaluate outcome need access to school attendance data that accurately describes a young person's

attendance and non-attendance. Because schools are increasingly held to account for the registration of attendance and non-attendance (Hutt and Gottfried, 2019; OFSTED, 2019) it is reasonable to expect that researchers and practitioners could acquire school-based data per half-day, and ideally per lesson. This can be converted to a percentage of school attendance for a specified time-frame [e.g., number of lessons (or hours) attended in a 4 week period divided by the total number of lessons (or hours) scheduled in that time-frame]. When possible, information should also be gathered about peri-attendance variables such as late arrival to school and absence from a lesson whilst still at school (e.g., spending time in the school counselor's office). Some schools may not (yet) collect such detailed data. To fill this gap, parents and youth can be asked to record attendance as well as peri-attendance variables. Presumably youth can provide a more accurate account of absence from class during attendance at school. To increase parent and youth compliance with the request for data, researchers and practitioners might use automated reminders (e.g., smartphone applications) or diaries managed via email contact. At the end of each week during the post-intervention and follow-up time-frames, youth and parents could be asked to list how many classes were held and which classes were attended. If possible, this would occur at the end of each day to reduce problems with recall at the end of the week. Because there are discrepancies in school- and parent-reported absences (Lomholt et al., 2020) and school- and youth-reported absences (Keppens et al., 2019) we recommend gathering data from all three sources and reporting outcomes for each group separately. Similarities and differences in outcomes based on youth-, parent-, and school-reported absences need to be taken into account when authors discuss the effectiveness of the intervention.

Second, constructs need to be measured via instruments with strong psychometric properties. Simply put, does the instrument measure the construct it is supposed to measure and in a reliable way? Important psychometric properties include construct validity, internal consistency reliability, test-retest reliability, and sensitivity to treatment effects (Spence, 2018). Psychometrically strong instruments are needed for group-wise significance tests when evaluating intervention effects in group-based studies. For case studies, two methods which practitioners can use to analyze clinically meaningful change are “crossing clinical thresholds” and “reliable change” (Wolpert et al., 2015). Such analyses also rely on measurement via psychometrically sound instruments. Other characteristics that render instruments more suitable for measuring outcome following intervention include applicability to a wide age range (e.g., to compare intervention effects for younger versus older students); availability for different respondents (e.g., youth, parents, teachers); availability of normative data and clinical cut-off scores (e.g., to determine whether change is clinically meaningful); and the time taken to administer the instrument. A more fundamental issue is the need to specify the instruments used to gather outcome data; this was not always the case in the studies we reviewed.

Third, when a majority of researchers and practitioners use the same instrument to measure a specific construct, the

comparison of outcomes across studies will be more robust. It will also be easier to combine data for meta-analyses, avoiding the methodological complications that occur when different measures of the same construct are used to create a common outcome measure (Bennett et al., 2013). As the field achieves greater consensus on which instruments are most valuable, efforts should be made to ensure instruments are available in many languages via thorough translation and adaptation processes that include forward and backward translation (Van Widenfelt et al., 2005).

Fourth, there should be more uniformity in the time-points for measuring constructs. To illustrate, one study assessed school attendance across the 4 weeks following intervention (Melvin et al., 2017) while earlier studies did so across 2 weeks (Heyne et al., 2011). We contend that the 4-week period provides a better test of the reliability of intervention effects with respect to school attendance, even though a 2-week time-frame is commonly employed in criteria for deciding whether a school attendance problem exists (Kearney, 2008). It is logical to apply the 4-week time-frame to the measurement of all chosen constructs. For example, 4 weeks after delivery of the final component of intervention, researchers or practitioners administer instruments to measure constructs such as anxiety and depression. If the CDI is used to measure depression, then 4 weeks after intervention finished the young person is invited to report symptoms of depression across the prior 2 weeks (the standard time-frame prescribed for administration of the CDI). Longer-term outcome is ideally based on follow-ups at 6 and 12 months after intervention finishes. This permits more robust evaluation of the young person's adjustment to the ongoing academic and social-emotional challenges of life at school. When interventions are prolonged (e.g., placement within an alternative educational setting), 6- and 12-months evaluations can take place during the course of the intervention, instead of waiting until a 12-month program is complete before evaluating its effects. Finally, alongside standard time-frames for measurement, researchers and practitioners may choose to conduct additional measurement at other time-points.

Fifth, there needs to be consistency in criteria for determining whether desired outcome is achieved, and clear specification by authors of the criteria they used. This will address Kearney and Silverman's (1990) observation 30 years ago that many studies of intervention for absenteeism used inconsistent or inadequate criteria for positive outcome. The constructs used to measure desired outcome will depend on the stated aims of the intervention. We found that many case studies included qualitative descriptions of outcome (e.g., "attendance and anxiety remained at acceptable levels"; Kearney, 2002a) whereas the group-based studies analyzed outcomes quantitatively (e.g., change in mean level of anxiety), although we also found qualitative descriptions in some group-based studies (e.g., "in general, youth no longer exhibited upset on arrival at school"; King et al., 2001). It is incumbent upon authors to report the proportion of cases fulfilling a specified outcome rather than relying on non-specific terms such as "in general" and "typically." With respect to school attendance, authors can report on the proportion of youth reaching a specific level of attendance,

alongside their reports of the average amount of attendance in the 4-week period since intervention finished. Chronic or persistent absenteeism is increasingly specified as 10% absence or more in a given time-frame (Heyne et al., *in press*) so a standard criterion for desired outcome would be attendance above 90%. To be able to compare outcomes across case studies and group-based studies, case studies could include a minimum level of quantitative data (e.g., whether or not the young person achieved more than 90% attendance at post-intervention). Authors can also consider combining constructs to determine the proportion of youth who simultaneously fulfill two or more criteria for desired outcome (see section "Combinations of Constructs").

Sixth, all stakeholders in interventions for SR – youth, parents, education professionals, and helping professionals – should be invited to report on the outcome of intervention to ensure a breadth of perspectives on outcome. In a meta-analysis of five decades of research on psychological interventions for youth, Weisz et al. (2017) argued that "it matters a lot" who reports on outcome, based on the observation that effect sizes differed across informants (p. 94). They emphasized the need for researchers and practitioners to obtain and integrate information from multiple informants and to be explicit about the source of outcome data. This emphasis on multi-source and multi-method assessment is not new to the field of school attendance and absenteeism (Ollendick and King, 1998; Kearney, 2002a). All stakeholders should also be consulted about the constructs that ought to be measured as outcomes following intervention for SR.

CONCLUSION

Are we measuring up? In other words, are we as researchers and practitioners measuring outcome in a way that helps to build a meaningful evidence base for SR intervention?

With respect to constructs measured, there has been some consistency across studies but also considerable variability. School attendance is the only construct that was measured in more than two-thirds of the studies. The fact that other "common" constructs (i.e., emotional and behavioral symptoms, anxiety, fear and/or fear of school, depression, self-efficacy, and global functioning) were measured in a third of studies or less might reflect variability in what was regarded as important to measure, but it might also reflect a failure to consider the benefit of measuring such constructs. It is unlikely that the low rate at which these "common" constructs were measured was due to the unavailability of instruments because there have been instruments to measure the majority of these constructs since the 1980s. Unfortunately, authors infrequently provided justification for the choice of constructs measured. With respect to the way in which constructs were measured, there was also substantial variability. It is important that authors of future studies clearly specify the rationale for focusing on specific constructs and for using specific instruments to measure those constructs.

Despite current shortcomings in the evaluation of outcome following SR intervention, the current review yields initial guidelines for researchers and practitioners planning to evaluate

outcome. Measurement of the more common constructs identified in this review (i.e., attendance; emotional, behavioral, and global functioning; self-efficacy) can be supplemented with measurement of the young person's social adjustment and the well-being of the young person, parents, and family. These guidelines may yield greater uniformity in the evaluation of interventions, benefitting science and practice, and thus the youth, parents, and schools impacted by SR.

The current review can also serve as a platform for further work on the development of a core outcome set for SR, possibly via the international consensus-based process presented in COS-STAP (Core Outcome Set-STAndardised Protocol Items; Kirkham et al., 2019). The fact that SR is not included as a disorder in classification systems such as the DSM does not negate the need for a core outcome set. Work on a core outcome set should foster broad stakeholder input, broader than the perspective of the authors of this paper. Attention should be paid to changes in education and technology, such as competency-based education and virtual learning (Kearney et al., 2019b) necessitating a reconceptualization of traditional outcomes such as percentage of time spent at school.

Attention should also be paid to the development of a core outcome set for interventions focused on truancy, the school attendance problem characterized by “skipping” or absconding from school (Heyne et al., 2019). In a systematic review and meta-analysis of the effects of interventions for truancy, Maynard et al. (2013) found considerable variability in how study authors operationalized and reported outcomes related to school attendance, and there was sometimes a lack of clarity about what had been measured (e.g., excused and/or unexcused absences). Maynard and colleagues called for greater consistency in measuring and reporting school attendance when evaluating truancy interventions. Broadening the perspective, Keppens and Spruyt (2020) concluded an integrative review of interventions

to prevent truancy with a call to evaluate outcomes other than truancy-related absence, such as graduation in the longer-term. Their review also signals the need to think more broadly about truancy, not simply as a behavior to be changed but also as a symptom of the need for change in school bonding.

In conclusion, measuring up to the task of advancing the science and practice of SR intervention requires greater consensus on the evaluation of outcome. This review contributes to the discussion about guidelines for evaluating outcome. Before a core outcome set becomes available we encourage researchers and practitioners to carefully consider and justify their choice of constructs and measurement methods. A collective effort is also needed to increase consistency in the choice of psychometrically sound instruments for measuring important constructs.

AUTHOR CONTRIBUTIONS

All authors were involved in designing the study, conducting the review, and preparing the manuscript.

FUNDING

This work was conducted independently of a research grant.

ACKNOWLEDGMENTS

We thank Maja Carlsson, specialist librarian in the Social Sciences Faculty Library at Lund University in Sweden, for her guidance in sourcing data. We also thank Mikael Thastum and Daniel Bach Johnsen, Department of Psychology and Behavioural Sciences at Aarhus University in Denmark, for their suggestions about measuring outcome.

REFERENCES

- Achenbach, T. M. (1991a). *Manual for the Child Behavior Checklist/4-18 and 1991 Profile*. Burlington, VT: University of Vermont, Department of Psychiatry.
- Achenbach, T. M. (1991b). *Manual for the Teacher's Report Form and 1991 Profile*. Burlington, VT: University of Vermont Department of Psychiatry.
- Achenbach, T. M. (1991c). *Manual for the Youth Self-Report and 1991 Profile*. Burlington, VT: University of Vermont Department of Psychiatry.
- Amai, K. (2020). Variables affecting the school adaptation of secondary-school students who do not seek help: attachment, coping style, positivity, and prospects. *Int. J. Adolesc. Youth* 25, 687–702. doi: 10.1080/02673843.2020.1717559
- American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders*, 4th Edn. Washington, DC: Author.
- American Psychological Association (2006). Presidential Task Force on Evidence-Based Practice. Evidence-based practice in psychology. *Am. Psychol.* 61, 271–285. doi: 10.1037/0003-066X.61.4.271
- *Anderson, J., King, N., Tonge, B., Rollings, S., Young, D., and Heyne, D. (1998). Cognitive-behavioural intervention for an adolescent school refuser: a comprehensive approach. *Behav. Change* 15, 67–73. doi: 10.1017/s0813483900003181
- Arksey, H., and O'Malley, L. (2005). Scoping studies: towards a methodological framework. *Int. J. Soc. Res. Methodol.* 8, 19–32. doi: 10.1080/1364557032000119616
- Atkinson, L., Quarrington, B., and Cyr, J. J. (1985). School refusal: the heterogeneity of a concept. *Am. J. Orthopsychiatry* 55, 83–101. doi: 10.1111/j.1939-0025.1985.tb03423.x
- Attwood, G., and Croll, P. (2006). Truancy in secondary school pupils: prevalence, trajectories and pupil perspectives. *Res. Pap. Educ.* 20, 467–484. doi: 10.1080/02671520600942446
- Balu, R., and Ehrlich, S. B. (2018). Making sense out of incentives: a framework for considering the design, use, and implementation of incentives to improve attendance. *J. Educ. Stud. Placed Risk* 23, 93–106. doi: 10.1080/10824669.2018.1438898
- *Beidas, R. S., Crawley, S. A., Mychailyszyn, M. P., Comer, J. S., and Kendall, P. C. (2010). Cognitive-behavioral treatment of anxious youth with comorbid school refusal: clinical presentation and treatment response. *Psychol. Top.* 19, 255–271.
- Bennett, K., Manassis, K., Walter, S., Cheung, A., Wilansky-Traynor, P., Diaz-Granados, N., et al. (2013). Cognitive behavioral therapy age effects in child and adolescent anxiety: an individual patient data meta-analysis. *Depress. Anxiety* 30, 829–841. doi: 10.1002/da.22099
- *Berg, I., and Jackson, A. (1985). Teenage school refusers grow up: a follow-up study of 168 subjects, ten years on average after in-patient treatment. *Br. J. Psychiatry* 147, 366–370. doi: 10.1192/bjp.147.4.366
- *Berney, T., Kolvin, I., Bhate, S. R., Garside, R. F., Jeans, J., Kay, B., et al. (1981). School phobia: a therapeutic trial with clomipramine and short-term outcome. *Br. J. Psychiatry* 138, 110–118. doi: 10.1192/bjp.138.2.110

- *Bernstein, G. A., Borchardt, C. M., Perwien, A. R., Crosby, R. D., Kushner, M. G., Thuras, P. D., et al. (2000). Imipramine plus cognitive-behavioral therapy in the treatment of school refusal. *J. Am. Acad. Child Adolesc. Psychiatry* 39, 276–283. doi: 10.1097/00004583-200003000-00008
- *Bernstein, G. A., Garfinkel, B. D., and Borchardt, C. M. (1990). Comparative studies of pharmacotherapy for school refusal. *J. Am. Acad. Child Adolesc. Psychiatry* 29, 773–781. doi: 10.1097/00004583-199009000-00016
- *Bernstein, G. A., Hektner, J. M., Borchardt, C. M., and McMillan, M. H. (2001). Treatment of school refusal: one-year follow-up. *J. Am. Acad. Child Adolesc. Psychiatry* 40, 206–213. doi: 10.1097/00004583-200102000-00015
- Birmaher, B., Brent, D. A., Chiappetta, L., Bridge, J., Monga, S., and Baugher, M. (1999). Psychometric properties of the screen for child anxiety related emotional disorders (SCARED): a replication study. *J. Am. Acad. Child Adolesc. Psychiatry* 38, 1230–1236. doi: 10.1097/00004583-199910000-00011
- *Blagg, N. R., and Yule, W. (1984). The behavioural treatment of school refusal: a comparative study. *Behav. Res. Ther.* 22, 119–127. doi: 10.1016/0005-7967(84)90100-1
- Blöte, A. W., Miers, A. C., Heyne, D. A., and Westenberg, P. M. (2015). “Social anxiety and the school environment of adolescents,” in *Social Anxiety and Phobia in Adolescents: Development, Manifestation and Intervention Strategies*, eds K. Ranta, A. M. La Greca, L.-J. Garcia-Lopez, and M. Marttunen (Switzerland: Springer International Publishing), 151–181. doi: 10.1007/978-3-319-16703-9_7
- Brouwer-Borghuis, M. L., Heyne, D., Sauter, F. M., and Scholte, R. H. (2019). The Link: an alternative educational program in the Netherlands to reengage school-refusing adolescents with schooling. *Cogn. Behav. Pract.* 26, 75–91. doi: 10.1016/j.cbpra.2018.08.001
- Bryce, G., and Baird, D. (1986). Precipitating a crisis: family therapy and adolescent school refusers. *J. Adolesc.* 9, 199–213. doi: 10.1016/s0140-1971(86)80003-3
- *Buitelaar, J. K., van Andel, H., Duyx, J. H. M., and van Strien, D. C. (1994). Depressive and anxiety disorders in adolescence: a follow-up study of adolescents with school refusal. *Acta Paedopsychiatr.* 56, 249–253.
- *Chhabra, T., and Puar, S. (2016). Social support in psychotherapy of panic disorder with agoraphobia in school setting. *Indian J. Health Wellbeing* 7, 648–650.
- *Chorpita, B. F., Albano, A. M., Heimberg, R. G., and Barlow, D. H. (1996). A systematic replication of the prescriptive treatment of school refusal behavior in a single subject. *J. Behav. Ther. Exp. Psychiatry* 27, 281–290. doi: 10.1016/s0005-7916(96)00023-7
- *Chu, B. C., Rizvi, S. L., Zendegui, E. A., and Bonavita, L. (2015). Dialectical behavior therapy for school refusal: treatment development and incorporation of web-based coaching. *Cogn. Behav. Pract.* 22, 317–330. doi: 10.1016/j.cbpra.2014.08.002
- *Conoley, J. C. (1987). Strategic family intervention: three cases of school-aged children. *Sch. Psychol. Rev.* 16, 469–486.
- Egger, H. L., Costello, J. E., and Angold, A. (2003). School refusal and psychiatric disorders: a community study. *J. Am. Acad. Child Adolesc. Psychiatry* 42, 797–807. doi: 10.1097/01.chi.0000046865.56865.79
- Elliott, J. G., and Place, M. (2019). Practitioner review: school refusal: developments in conceptualisation and treatment since 2000. *J. Child Psychol. Psychiatry* 60, 4–15. doi: 10.1111/jcpp.12848
- Finning, K., Ukoumunne, O. C., Ford, T., Danielson-Waters, E., Shaw, L., Romero De Jager, I., et al. (2019). The association between anxiety and poor attendance at school: a systematic review. *Child Adolesc. Ment. Health* 24, 205–216. doi: 10.1111/camh.12322
- *Flakierska, N., Lindström, M., and Gillberg, C. (1988). School refusal: a 15–20-year follow-up study of 35 Swedish urban children. *Br. J. Psychiatry* 152, 834–837. doi: 10.1192/bjp.152.6.834
- Flakierska-Praquin, N., Lindström, M., and Gillberg, C. (1997). School phobia with separation anxiety disorder: a comparative 20- to 29-year follow-up study of 35 school refusers. *Compr. Psychiatry* 38, 17–22. doi: 10.1016/s0010-440x(97)90048-1
- Fredricks, J. A., and McColskey, W. (2012). “The measurement of student engagement: a comparative analysis of various methods and student self-report instruments,” in *Handbook of Research on Student Engagement*, eds S. Christenson, A. Reschly, and C. Wylie (Boston, MA: Springer), 763–782. doi: 10.1007/978-1-4614-2018-7_37
- Furuichi, Y., and Tamaki, H. (1994). Factors contributing to the enjoyment of junior high school life. *Bull. Faculty Educ. Okayama Univ.* 96, 105–113.
- Gallé-Tessoneau, M., and Heyne, D. (2020). Behind the SCREEN: identifying school refusal themes and sub-themes. *Emot. Behav. Diff.* 25, 139–154. doi: 10.1080/13632752.2020.1733309
- Gallé-Tessoneau, M., and Gana, K. (2019). Development and validation of the school refusal evaluation scale for adolescents. *J. Pediatr. Psychol.* 44, 153–163. doi: 10.1093/jpepsy/jsy061
- García-Fernández, J. M., Inglés, C. J., Martínez-Monteagudo, M. C., Marzo, J. C., and Estévez, E. (2011). Inventario de Ansiedad Escolar: validación en una muestra de estudiantes de Educación Secundaria. *Psicothema* 23, 301–307.
- García-Fernández, J. M., Inglés, C. J., Marzo, J. C., and Martínez-Monteagudo, M. C. (2014). Psychometric properties of the school anxiety inventory-short version in Spanish secondary education students. *Psicothema* 26, 286–292. doi: 10.7334/psicothema2013.288
- Gershenson, S., Jackowitz, A., and Brannegan, A. (2017). Are student absences worth the worry in US primary schools? *Educ. Finance Policy* 12, 137–165. doi: 10.1162/edfp_a_00207
- *Goh, C. W. (1989). School refusal: clinical features and treatment outcome. *Singapore Med. J.* 30, 550–552.
- Goodman, R. (1999). The extended version of the strengths and difficulties questionnaire as a guide to child psychiatric caseness and consequent burden. *J. Child Psychol. Psychiatry* 40, 791–801.
- *Gosschalk, P. O. (2004). Behavioral treatment of acute onset school refusal in a 5-year old girl with separation anxiety disorder. *Educ. Treat. Child.* 27, 150–160.
- Gottfried, M. A. (2014). Chronic absenteeism and its effects on students’ academic and socioemotional outcomes. *J. Educ. Stud. Placed Risk* 19, 53–75. doi: 10.1080/10824669.2014.962696
- Gowers, S. G., Harrington, R. C., Whitton, A., Lelliott, P., Wing, J., Beevor, A., et al. (1999). Brief scale for measuring the outcomes of emotional and behavioural disorders in children: health of the Nation outcome scales for children and adolescents (HoNOSCA). *Br. J. Psychiatry* 174, 413–416. doi: 10.1192/bjp.174.5.413
- *Gutiérrez-Maldonado, J., Magallón-Neri, E., Rus-Calafell, M., and Peñaloza-Salazar, C. (2008). Virtual reality exposure therapy for school phobia. *Anuario Psicol.* 40, 223–236.
- Hadi, S. R. A., Razak, A. H. A., Kalil, E. Z., and Ismail, W. S. W. (2014). Parental issues contributing to school refusal: a case report. *ASEAN J. Psychiatry* 15, 83–85.
- *Hagopian, L. P., and Slifer, K. J. (1993). Treatment of separation anxiety disorder with graduated exposure and reinforcement targeting school attendance: a controlled case study. *J. Anxiety Disord.* 7, 271–280. doi: 10.1016/0887-6185(93)90007-8
- *Hargett, M. Q., and Webster, R. E. (1996). Treatment integrity and acceptability with families: a case study of a child with school refusal. *Psychol. Sch.* 33, 319–324. doi: 10.1002/(sici)1520-6807(199610)33:4<319::aid-pits6>3.0.co;2-h
- Havik, T., Bru, E., and Ertesvåg, S. K. (2015). Assessing reasons for school non-attendance. *Scand. J. Educ. Res.* 59, 316–336. doi: 10.1080/00313831.2014.904424
- Head, G., and Jamieson, S. (2006). Taking a line for a walk: including school refusers. *Pastoral Care Educ.* 24, 32–40. doi: 10.1111/j.1468-0122.2006.00377.x
- Heubeck, B. G., and Neill, J. T. (2000). Confirmatory factor analysis and reliability of the Mental Health Inventory for Australian adolescents. *Psychol. Rep.* 87, 431–440. doi: 10.2466/PRO.87.6.431-440
- Heyne, D. (2006). “School refusal,” in *Practitioner’s Guide to Evidence-Based Psychotherapy*, eds J. E. Fisher and W. T. O’Donohue (New York, NY: Springer), 599–618.
- Heyne, D. (2019). Developments in classification, identification, and intervention for school refusal and other attendance problems: introduction to the special series. *Cogn. Behav. Pract.* 26, 1–7. doi: 10.1016/j.cbpra.2018.12.003
- Heyne, D., Gren-Landell, M., Melvin, G., and Gentle-Genitty, C. (2019). Differentiation between school attendance problems: why and how? *Cogn. Behav. Pract.* 26, 8–34. doi: 10.1016/j.cbpra.2018.03.006
- Heyne, D., Kearney, C. A., and Finning, K. (in press). “Introduction,” in *Mental Health and Attendance at School*, eds T. Ford, K. Finning, and D. Moore (Cambridge, MA: Cambridge University Press).

- Heyne, D., King, N., Tonge, B., Rollings, S., Pritchard, M., Young, D., et al. (1998). The self-efficacy questionnaire for school situations: development and psychometric evaluation. *Behav. Change* 15, 31–40. doi: 10.1017/S081348390000588X
- Heyne, D., and King, N. J. (2004). "Treatment of school refusal," in *Handbook of Interventions That Work with Children and Adolescents: Prevention and Treatment*, eds P. M. Barrett and T. H. Ollendick (Chichester: John Wiley & Sons, Ltd), 243–272.
- *Heyne, D., King, N. J., Tonge, B. J., Rollings, S., Young, D., Pritchard, M., et al. (2002). Evaluation of child therapy and caregiver training in the treatment of school refusal. *J. Am. Acad. Child Adolesc. Psychiatry* 41, 687–695. doi: 10.1097/00004583-200206000-00008
- Heyne, D., Maric, M., and Westenberg, P. M. (2007). *Self-Efficacy Questionnaire for Responding to School Attendance Problems. Unpublished Measure*. Leiden: Leiden University.
- Heyne, D., and Rollings, S. (2002). *School Refusal*. Malden: Blackwell.
- Heyne, D., and Sauter, F. M. (2013). "School Refusal," in *The Wiley-Blackwell Handbook of The Treatment of Childhood and Adolescent Anxiety*, eds C. A. Essau, and T. H. Ollendick (Hoboken, NJ: John Wiley & Sons), 471–517.
- Heyne, D., Sauter, F. M., and Maynard, B. R. (2015). "Moderators and mediators of treatments for youth with school refusal or truancy," in *Moderators and Mediators of Youth Treatment Outcomes*, eds M. Maric, P. J. M. Prins, and T. H. Ollendick (Oxford: Oxford University Press), 230–266. doi: 10.1093/med:psych/9780199360345.003.0010
- *Heyne, D., Sauter, F. M., Ollendick, T. H., Van Widenfelt, B. M., and Westenberg, P. M. (2014). Developmentally sensitive cognitive behavioral therapy for adolescent school refusal: rationale and case illustration. *Clin. Child Fam. Psychol. Rev.* 17, 191–215.
- *Heyne, D., Sauter, F. M., Van Widenfelt, B. M., Vermeiren, R., and Westenberg, P. M. (2011). School refusal and anxiety in adolescence: non-randomized trial of a developmentally sensitive cognitive behavioral therapy. *J. Anxiety Disord.* 25, 870–878. doi: 10.1016/j.janxdis.2011.04.006
- Hobbs, A., Kotlaja, M., and Wylie, L. (2018). Absenteeism interventions: an approach for common definitions in statewide program evaluations. *Justice Eval. J.* 1, 215–232. doi: 10.1080/24751979.2018.1517584
- Hughes, E. K., Gullone, E., Dudley, A., and Tonge, B. (2010). A case-control study of emotion regulation and school refusal in children and adolescents. *J. Early Adolesc.* 30, 691–706. doi: 10.1177/0272431609341049
- Hutt, E. L., and Gottfried, M. A. (2019). "Conclusion," in *Absent from School: Understanding and Addressing Student Absenteeism*, eds M. A. Gottfried and E. L. Hutt (Cambridge, MA: Harvard Education Press), 213–220.
- Inglés, C. J., González-Maciá, C., García-Fernández, J. M., Vicent, M., and Martínez-Monteagudo, M. C. (2015). Current status of research on school refusal. *Eur. J. Educ. Psychol.* 8, 37–52.
- Ingul, J. M., Havik, T., and Heyne, D. (2019). Emerging school refusal: a school-based framework for identifying early signs and risk factors. *Cogn. Behav. Pract.* 26, 46–62. doi: 10.1016/j.cbpra.2018.03.005
- Ingul, J. M., and Nordahl, H. M. (2013). Anxiety as a risk factor for school absenteeism: What differentiates anxious school attenders from non-attenders?. *Ann. Gen. Psychiatry* 12:25. doi: 10.1186/1744-859X-12-25
- *Kearney, C. A. (2002a). Case study of the assessment and treatment of a youth with multifunction school refusal behaviour. *Clin. Case Stud.* 1, 67–80. doi: 10.1177/1534650102001001006
- Kearney, C. A. (2002b). Identifying the function of school refusal behavior: a revision of the school refusal assessment scale. *J. Psychopathol. Behav. Assess.* 24, 235–245. doi: 10.1023/A:1020774932043
- Kearney, C. A. (2008). An interdisciplinary model of school absenteeism in youth to inform professional practice and public policy. *Educ. Psychol. Rev.* 20, 257–282. doi: 10.1007/s10648-008-9078-3
- Kearney, C. A. (2016). *Managing School Absenteeism at Multiple Tiers: An Evidence-Based and Practical Guide for Professionals*. Oxford: Oxford University Press.
- Kearney, C. A., and Albano, A. M. (2000). *When Children Refuse School: A Cognitive-Behavioral Therapy Approach, Parent Workbook*. San Antonio, TX: The Psychological Corporation.
- Kearney, C. A., González, C., Graczyk, P. A., and Fornander, M. J. (2019a). Reconciling contemporary approaches to school attendance and school absenteeism: toward promotion and nimble response, global policy review and implementation, and future adaptability (Part 1). *Front. Psychol.* 10:2222. doi: 10.3389/fpsyg.2019.02222
- Kearney, C. A., González, C., Graczyk, P. A., and Fornander, M. J. (2019b). Reconciling contemporary approaches to school attendance and school absenteeism: toward promotion and nimble response, global policy review and implementation, and future adaptability (Part 2). *Front. Psychol.* 10:2605. doi: 10.3389/fpsyg.2019.02605
- Kearney, C. A., and Graczyk, P. (2014). A response to intervention model to promote school attendance and decrease school absenteeism. *Child Youth Care Forum* 43, 1–25. doi: 10.1007/s10566-013-9222-1
- *Kearney, C. A., Pursell, C., and Alvarez, K. (2001). Treatment of school refusal behavior in children with mixed functional profiles. *Cogn. Behav. Pract.* 8, 3–11. doi: 10.1016/s1077-7229(01)80037-7
- *Kearney, C. A., and Silverman, W. K. (1990). A preliminary analysis of a functional model of assessment and treatment for school refusal behavior. *Behav. Modif.* 14, 340–366. doi: 10.1177/01454455900143007
- Kearney, C. A., and Silverman, W. K. (1993). Measuring the function of school refusal behavior: the school refusal assessment scale. *J. Clin. Child Psychol.* 22, 85–96. doi: 10.1207/s15374424jccp2201_9
- Keppens, G., and Spruyt, B. (2020). The impact of interventions to prevent truancy: a review of the research literature. *Stud. Educ. Eval.* 65:100840. doi: 10.1016/j.stueduc.2020.100840
- Keppens, G., Spruyt, B., and Dockx, J. (2019). Measuring school absenteeism: administrative attendance data collected by schools differ from self-reports in systematic ways. *Front. Psychol.* 10:2623. doi: 10.3389/fpsyg.2019.02623
- Kidscreen Group Europe (2006). *The KIDSCREEN Questionnaires: Quality of Life Questionnaires for Children and Adolescents*. Lengerich: Pabst Science Publishers.
- *King, N., Tonge, B. J., Heyne, D., Turner, S., Pritchard, M., Young, D., et al. (2001). Cognitive-behavioural treatment of school-refusing children: maintenance of improvement at 3- to 5-year follow-up. *Scand. J. Behav. Therapy* 30, 85–90.
- *King, N. J., Tonge, B. J., Heyne, D., Pritchard, M., Rollings, S., Young, D., et al. (1998). Cognitive-behavioral treatment of school-refusing children: a controlled evaluation. *J. Am. Acad. Child Adolesc. Psychiatry* 37, 395–403. doi: 10.1097/00004583-199804000-00017
- *King, N. J., Tonge, B. J., Turner, S., Heyne, D., Pritchard, M., Rollings, S., et al. (1999). Brief cognitive-behavioural treatment for anxiety-disordered children exhibiting school refusal. *Clin. Psychol. Psychother.* 6, 39–45. doi: 10.1002/(sici)1099-0879(199902)6:1<39::aid-cpp178>3.0.co;2-w
- Kirkham, J. J., Gorst, S., Altman, D. G., Blazeby, J. M., Clarke, M., Devane, D., et al. (2016). Core outcome set - STAndards for reporting: the COS-STAR statement. *PLoS Med.* 13:e1002148. doi: 10.1371/journal.pmed.1002148
- Kirkham, J. J., Gorst, S., Altman, D. G., Blazeby, J. M., Clarke, M., Tunis, S., et al. (2019). Core outcome set-STANDARDISED protocol items: the COS-STAP statement. *Trials* 20:116. doi: 10.1186/s13063-019-3230-x
- Kolubinski, D. C., Frings, D., Nikèevia, A. V., Lawrence, J. A., and Spada, M. M. (2018). A systematic review and meta-analysis of CBT interventions based on the Fennell model of low self-esteem. *Psychiatry Res.* 267, 296–305. doi: 10.1016/j.psychres.2018.06.025
- Kovacs, M. (1992). *Children's Depression Inventory*. New York, NY: Multi-Health Systems, Inc.
- Krebs, P., Norcross, J. C., Nicholson, J. M., and Prochaska, J. O. (2018). Stages of change and psychotherapy outcomes: a review and meta-analysis. *J. Clin. Psychol.* 74, 1964–1979. doi: 10.1002/jclp.22683
- Kurita, H. (1991). School refusal in pervasive developmental disorders. *J. Autism. Dev. Disord.* 21, 1–15. doi: 10.1007/bf02206993
- *Last, C. G., Hansen, C., and Franco, N. (1998). Cognitive-behavioral treatment of school phobia. *J. Am. Acad. Child Adolesc. Psychiatry* 37, 404–411. doi: 10.1097/00004583-199804000-00018
- Law, D., and Jacob, J. (2015). *Goals and Goal Based Outcomes (GBOs): Some Useful Information*, third Edn. London: CAMHS Press.
- *Lepola, U., Leinonen, E., and Koponen, H. (1996). Citalopram in the treatment of early-onset panic disorder and school phobia. *Pharmacopsychiatry* 29, 30–32. doi: 10.1055/s-2007-979539
- Lomholt, J. J., Johnsen, D. B., Silverman, W. K., Heyne, D., Jeppesen, P., and Thastum, M. (2020). Feasibility study of Back2School, a modular cognitive behavioral intervention for youth with school attendance problems. *Front. Psychol.* 11:586. doi: 10.3389/fpsyg.2020.00586

- Lyneham, H. J., Street, A. K., Abbott, M. J., and Rapee, R. M. (2008). Psychometric properties of the school anxiety scale-teacher report (SAS-TR). *J. Anxiety Disord.* 22, 292–300. doi: 10.1016/j.janxdis.2007.02.001
- *Maeda, N. (2012). The effects of active parental intervention on school refusal behaviour. *Prog. Soc. Welfare Res.* 7, 15–25.
- *Maeda, N. (2016). School-based behavioural consultation for school-refusal behaviour. *Int. J. Psychol. Stud.* 8, 40–52.
- *Maeda, N. (2017). Effectiveness of Morita Therapy-based consultation for a school-refusing adolescent with psychogenic fever. *J. Educ. Train. Stud.* 5, 1–7.
- *Maeda, N., Hatada, S., Sonoda, J., and Takayama, I. (2012). School-based intensive exposure therapy for school refusal behavior. *Clin. Case Stud.* 11, 299–311. doi: 10.1177/1534650112457456
- Malcolm, H., Wilson, V., Davidson, J., and Kirk, S. (2003). *Absence from School: A Study of its Causes and Effect in Seven LEAs*. Nottingham, UK: Queen's Printers.
- *Mansdorf, I. J., and Lukens, E. (1987). Cognitive-behavioral psychotherapy for separation anxious children exhibiting school phobia. *J. Am. Acad. Child Adolesc. Psychiatry* 26, 222–225. doi: 10.1097/00004583-198703000-00018
- March, J. S. (2013). *Multidimensional Anxiety Scale for Children*, 2nd Edn. Toronto: Multi-Health Systems.
- March, J. S., Parker, J. D. A., Sullivan, K., Stallings, P., and Conners, C. K. (1997). The multidimensional anxiety scale for children (MASC): factor structure, reliability, and validity. *J. Am. Acad. Child Adolesc. Psychiatry* 36, 554–565. doi: 10.1097/00004583-199704000-00019
- Maric, M., Heyne, D. A., de Heus, P., van Widenfelt, B. M., and Westenberg, P. M. (2012). The role of cognition in school refusal: an investigation of automatic thoughts and cognitive errors. *Behav. Cogn. Psychother.* 40, 255–269. doi: 10.1017/s1352465811000427
- Martin, A. J. (2014). *The Motivation and Engagement Scale*, 14th Edn. Sydney: Lifelong Achievement Group.
- Maynard, B. R., Heyne, D., Brendel, K. E., Bulanda, J. J., Thompson, A. M., and Pigott, T. D. (2018). Treatment for school refusal among children and adolescents: a systematic review and meta-analysis. *Res. Soc. Work Pract.* 28, 56–67. doi: 10.1177/1049731515598619
- Maynard, B. R., McCreary, K. T., Pigott, T. D., and Kelly, M. S. (2013). Indicated truancy interventions for chronic truant students: a campbell systematic review. *Res. Soc. Work Pract.* 23, 5–21. doi: 10.1177/1049731512457207
- *McCune, N., and Hynes, J. (2005). Ten year follow-up of children with school refusal. *Irish J. Psychol. Med.* 22, 56–58. doi: 10.1017/s0790966700008946
- *McKay-Brown, L., McGrath, R., Dalton, L., Graham, L., Smith, A., Ring, J., et al. (2019). Reengagement with education: a multidisciplinary home-school-clinic approach developed in Australia for school-refusing youth. *Cogn. Behav. Pract.* 26, 92–106. doi: 10.1016/j.cbpra.2018.08.003
- *McShane, G., Bazzano, C., Walter, G., and Barton, G. (2007). Outcome of patients attending a specialist educational and mental health service for social anxiety disorders. *Clin. Child Psychol. Psychiatry* 12, 117–124. doi: 10.1177/1359104507071090
- *Melvin, G. A., Dudley, A. L., Gordon, M. S., Klimkeit, E., Gullone, E., Taffe, J., et al. (2017). Augmenting cognitive behavior therapy for school refusal with Fluoxetine: a randomized controlled trial. *Child Psychiatry Hum. Dev.* 48, 485–497. doi: 10.1007/s10578-016-0675-y
- Melvin, G. A., and Gordon, M. S. (2019). Antidepressant medication: is it a viable and valuable adjunct to cognitive-behavioral therapy for school refusal? *Cogn. Behav. Pract.* 26, 107–118. doi: 10.1016/j.cbpra.2018.07.005
- *Meyer, E. A., Hagopian, L. P., and Paclawsky, J. (1999). A function-based treatment for school refusal behavior using shaping and fading. *Res. Dev. Disabil.* 20, 401–410. doi: 10.1016/s0891-4222(99)00021-9
- *Moffitt, C. E., Chorpita, B. F., and Fernandez, S. N. (2003). Intensive cognitive-behavioral treatment of school refusal behaviour. *Cogn. Behav. Pract.* 10, 51–60. doi: 10.1016/s1077-7229(03)80008-1
- Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., and Prisma Group, R. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA Statement. *PLoS Med.* 6:e1000097. doi: 10.1371/journal.pmed1000097
- Obbarius, A., van Maasakkers, L., Baer, L., Clark, D. M., Crocker, A. G., de Beurs, E., et al. (2017). Standardization of health outcomes assessment for depression and anxiety: recommendations from the ICHOM Depression and Anxiety Working Group. *Qual. Life Res.* 26, 3211–3225. doi: 10.1007/s11136-017-1659-5
- OFSTED (2019). *The Education Inspection Framework*. Manchester: Ofsted.
- Ollendick, T. H. (1983). Reliability and validity of the Revised Fear Survey Schedule for Children (FSSCR). *Behav. Res. Ther.* 21, 685–692. doi: 10.1016/0005-7967(83)90087-6
- Ollendick, T. H., and King, N. J. (1998). Assessment practices and issues with school-refusing children. *Behav. Change* 15, 16–30. doi: 10.1017/S0813483900005878
- Olson, D. H., Portner, J., and Bell, R. Q. (1982). *Family Adaptability and Cohesion Evaluation Scale II*. St. Paul, MN: University of Minnesota.
- Ouzzani, M., Hammady, H., Fedorowicz, Z., and Elmagarmid, A. (2016). Rayyan - a web and mobile app for systematic reviews. *Syst. Rev.* 5:210. doi: 10.1186/s13643-016-0384-384
- Peters, M. D. J., Godfrey, C. M., Khalil, H., McInerney, P., Parker, D., and Soares, C. B. (2015). Guidance for conducting systematic scoping reviews. *Int. J. Evid. Based Healthc.* 13, 141–146. doi: 10.1097/xe.0000000000000050
- Pham, M. T., Rajiæ, A., Greig, J. D., Sargeant, J. M., Papadopoulos, A., and McEwen, S. A. (2014). A scoping review of scoping reviews: advancing the approach and enhancing the consistency. *Res. Synth. Methods* 5, 371–385. doi: 10.1002/jrsm.1123
- *Phillips, D., and Wolpe, S. (1981). Multiple behavioral techniques in severe separation anxiety of a twelve-year-old. *J. Behav. Ther. Exp. Psychiatry* 12, 329–332. doi: 10.1016/0005-7916(81)90073-2
- Pina, A. A., Zerr, A. A., Gonzales, N. A., and Ortiz, C. D. (2009). Psychosocial interventions for school refusal behavior in children and adolescents. *Child Dev. Perspect.* 3, 11–20. doi: 10.1111/j.1750-8606.2008.00070.x
- Place, M., Hulsmeier, J., Davis, S., and Taylor, E. (2002). The coping mechanisms of children with school refusal. *J. Res. Spec. Educ. Needs* 2, 1–10. doi: 10.1111/j.1471-3802.2002.00167.x
- *Prabhswamy, M., Srinath, S., Girimaji, S., and Seshadri, S. (2007). Outcome of children with school refusal. *Indian J. Pediatr.* 74, 375–379. doi: 10.1007/s12098-007-0063-5
- *Preece, D., and Howley, M. (2018). An approach to supporting young people with autism spectrum disorder and high anxiety to re-engage with formal education - the impact on young people and their families. *Int. J. Adolesc. Youth* 23, 468–481.
- Reynolds, C. R., and Richmond, B. O. (1985). *Revised Children's Manifest Anxiety Scale: Second Edition*. Los Angeles: Western Psychological Services.
- Reynolds, C. R., and Richmond, B. O. (2008). *Revised Children's Manifest Anxiety Scale*. Los Angeles, CA: Western Psychological Services.
- *Roberts, D. (1998). The use of hypnosis and brief strategic therapy with a case of separation anxiety and school refusal. *Contemp. Hypnosis* 15, 219–222. doi: 10.1002/ch.138
- Rodriguez-Quintana, N., and Lewis, C. C. (2019). Ready or not? Transitions of depressed adolescents during acute phase of treatment. *Child Psychiatry Hum. Dev.* 50, 950–959. doi: 10.1007/s10578-019-00895-4
- *Rollings, S., King, N., Tonge, B., Heyne, D., and Young, D. (1998). Cognitive-behavioural intervention with a depressed adolescent experiencing school attendance difficulties. *Behav. Change* 15, 87–97. doi: 10.1017/S081348390000320X
- Schoenberger, J. A. (2012). Longitudinal attendance patterns: developing high school dropouts. *Clear. House J. Educ. Strateg. Issues Ideas* 85, 7–14. doi: 10.1080/00098655.2011.603766
- Silverman, W. K., and Albano, A. M. (1996). *Anxiety Disorders Interview Schedule for DSM-IV, Child and Parent Versions*. San Antonio, TX: Psychological Corporation.
- Spence, S. H. (1998). A measure of anxiety symptoms among children. *Behav. Res. Ther.* 36, 545–566. doi: 10.1016/s0005-7967(98)00034-5
- Spence, S. H. (2018). Assessing anxiety disorders in children and adolescents. *Child Adolesc. Ment. Health* 23, 266–282. doi: 10.1111/camh.12251
- Spielberger, C. D., Edwards, C. D., Lushene, R., Montuori, J., and Platzek, D. (1973). *State-Trait Anxiety Inventory for Children: Sampler Set, Manual, Test Booklet, Scoring Key*. Palo Alto, CA: Mind Garden.
- Steinhausen, H.-C., Müller, N., and Metzke, C. W. (2008). Frequency, stability and differentiation of self-reported school fear and truancy in a community sample. *Child Adolesc. Psychiatry Ment. Health* 2:17.

- *Takata, Y. (2002). Supporting by a nurse teacher in a school infirmary using collage therapy. *Psychiatry Clin. Neurosci.* 56, 371–379. doi: 10.1046/j.1440-1819.2002.01025.x
- Thornton, M., Darmody, M., and McCoy, S. (2013). Persistent absenteeism among Irish primary school pupils. *Educ. Rev.* 65, 488–501. doi: 10.1080/00131911.2013.768599
- *Tolin, D. F., Whiting, S., Maltby, N., Diefenbach, G. J., Lothstein, M. A., Hardcastle, S., et al. (2009). Intensive (daily) behavior therapy for school refusal: a multiple baseline case series. *Cogn. Behav. Pract.* 16, 332–344. doi: 10.1016/j.cbpra.2009.02.003
- Tonge, B. J., and Silverman, W. K. (2019). Reflections on the field of school attendance problems: for the times they are a-changing? *Cogn. Behav. Pract.* 26, 119–126. doi: 10.1016/j.cbpra.2018.12.004
- Torrens Armstrong, A. M., McCormack Brown, K. R., Brindley, R., Coreil, J., and McDermott, R. J. (2011). Frequent fliers, school phobias, and the sick student: school health personnel's perceptions of students who refuse school. *J. Sch. Health* 81, 552–559. doi: 10.1111/j.1746-1561.2011.00626.x
- Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., et al. (2018). PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Ann. Intern. Med.* 169, 467–473.
- Ura, S. K., Castro-Olivo, S. M., and d'Abreu, A. (2019). Outcome measurement of school-based SEL intervention follow-up studies. *Assess. Effect. Intervent.* doi: 10.1177/1534508419862619
- *Valles, E., and Oddy, M. (1984). The influence of a return to school on the long-term adjustment of school refusers. *J. Adolesc.* 7, 35–44. doi: 10.1016/0140-1971(84)90046-0
- Van Widenfelt, B. M., Treffers, P. D. A., De Beurs, E., Siebelink, B. M., and Koudijs, E. (2005). Translation and cross-cultural adaptation of assessment instruments used in psychological research with children and families. *Clin. Child Fam. Psychol. Rev.* 8, 135–147. doi: 10.1007/s10567-005-4752-1
- Weisz, J. R., Kuppens, S., Ng, M. Y., Eckshtain, D., Ugueto, A. M., Vaughn-Coaxum, R., et al. (2017). What five decades of research tells us about the effects of youth psychological therapy: a multilevel meta-analysis and implications for science and practice. *Am. Psychol.* 72, 79–117. doi: 10.1037/a0040360
- Whittemore, R., and Knafl, K. (2005). The integrative review: updated methodology. *J. Adv. Nurs.* 52, 546–553. doi: 10.1111/j.1365-2648.2005.03621.x
- Wolpert, M., Görzig, A., Deighton, J., Fugard, A. J. B., Newman, R., and Ford, T. (2015). Comparison of indices of clinically meaningful change in child and adolescent mental health services: difference scores, reliable change, crossing clinical thresholds and 'added value' – an exploration using parent scores on the SDQ. *Child Adolesc. Ment. Health* 20, 94–101. doi: 10.1111/camh.12080
- *Wu, X., Liu, F., Cai, H., Huang, L., Li, Y., Mo, Z., et al. (2013). Cognitive behaviour therapy combined Fluoxetine treatment superior to cognitive behaviour therapy alone for school refusal. *Int. J. Pharmacol.* 9, 197–203. doi: 10.3923/ijp.2013.197.203

* Publications reviewed in the current study.

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2020 Heyne, Strömbeck, Alanko, Bergström and Ulriksen. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.

APPENDIX A | SEARCH TERMS

“school refus*” (school refusal / school refusing / school refuser) OR “school phobi*” (school phobia / school phobic) OR “anxiety-based school refus*” OR “anxiety-based absen*” (anxiety-based absence / anxiety-based absentee / anxiety-based absenteeism) OR “anx* school refus*” (anxious school refus* / anxious school refusing) OR “school reluctan*” (school reluctance / school reluctant; as long as the youth are not identified as truanting or showing some other attendance problem) OR “school absen*” (school absence / school absentee / school absenteeism; as long as the youth are not identified as truanting or showing some other attendance problem) OR “school avoidan*” (school avoider / school avoidance / school avoidant; as long as the youth are not identified as truanting or showing some other attendance problem) OR “emotional* absen*” (emotional absen* / emotionally absen*) OR “school refus* behav*” (school refus* behaviour / school refus* behaviour) OR “separation anx*” (separation anxiety / separation anxious; as long as this was conceptually linked to absence from school or difficulty going to school) AND [Child* (child / childhood / children) OR adolescen* (adolescence / adolescent) OR student* (student / students) OR youth* (youth / youths) OR young* (young / youngster) OR teenage* (teenage / teenager) OR “lower school” OR “upper school” OR “grammar school” OR “high school”] AND [RCT OR experiment* OR “quasi experiment*” OR “longitudinal*” OR “control group*” OR “case control” OR “quasi-experiment*” OR “case stud*” (case study / case studies) OR “follow-up” OR interven* (intervene / intervening / intervention) OR program* (program / programme) OR outcome* OR eval* (evaluate / evaluated / evaluation)].

APPENDIX B | PUBLICATIONS USING DATA FROM A SAMPLE REPORTED IN AN EARLIER PUBLICATION, EXCLUDED AT STEP 2 OF SCREENING

- Elsherbiny, M. M. (2017). Using a preventive social work program for reducing school refusal. *Children Sch.* 39, 81–88.
- Flakierska-Praquin, N., Lindström, M., and Gillberg, C. (1997). School phobia with separation anxiety disorder: a comparative 20- to 29-year follow-up study of 35 school refusers. *Comprehens. Psychiatry* 38, 17–22.
- Layne, A. E., Bernstein, G. A., Egan, E. A., and Kushner, M. G. (2003). Predictors of treatment response in anxious-depressed adolescents with school refusal. *J. Am. Acad. Child Adol. Psychiatry* 42, 319–326.
- Nishida, A., Sugiyama, S., Aoki, S., and Kuroda, S. (2004). Characteristics and outcomes of school refusal in Hiroshima, Japan: proposals for network therapy. *Acta Med. Okayama* 58, 241–249.
- Nuttall, C., and Woods, K. (2013). Effective intervention for school refusal behaviour. *Educ. Psychol. Practice* 29, 347–366.
- Reissner, V., Jost, D., Krahn, U., Knollmann, M., Weschenfelder, A.-K., Neumann, A., et al. (2015). The treatment of school avoidance in children and adolescents with psychiatric illness: a randomized controlled trial. *Deutsc. Ärzteb. Int.* 112, 655–662.
- Siboni, J., Orri, M., Podlipski, M. A., Labey, M., Campredon, S., Gerardin, P., et al. (2018). The experience of psychiatric care of adolescents with anxiety-based school refusal and of their parents: a qualitative study. *J. Canad. Acad. Child Adol. Psychiatry* 27, 39–49.
- Walter, D., Hautmann, C., Minkus, J., Petermann, M., Lehmkuhl, G., Goertz-Dorten, A., et al. (2013). Predicting outcome of inpatient CBT for adolescents with anxious-depressed school absenteeism. *Clin. Psychol. Psychother.* 20, 206–215.

APPENDIX C | PUBLICATIONS REPORTING CASE STUDIES THAT WERE EXCLUDED AT STEP 3 OF SCREENING

- Chabrol, H., Fouraste, R., Morón, P., and Zorzano, M. T. (1995). Father-child hospitalization in the separation anxiety. *Actas Luso Exp. Neurol. Psiquiatr. Cienc. Afines* 23, 223–226.
- Christogiorgos, S., and Giannakopoulos, G. (2014). School refusal and the parent-child relationship: a psychodynamic perspective. *J. Infant Child Adol. Psychother.* 13, 182–192.
- Coulter, S. (1995). School refusal, parental control and wider systems: lessons from the management of two cases. *Irish J. Psychol. Med.* 12, 146–149.
- Ding, J., Gadit, A. M., and Peer, S. B. (2014). School refusal in adolescent young man: could this be an idiopathic amotivational syndrome? *BMJ Case Rep.* 2014:bcr2013203508.
- Hadi, S. R. A., Razak, A. H. A., Kalil, E. Z., and Ismail, W. S. W. (2014). Parental issues contributing to school refusal: a case report. *ASEAN J. Psychiatry* 15, 83–85.
- Oner, O., Yurtbasi, P., Er, A., and Basoglu, N. (2014). The inpatient treatment process for severe school refusal. *Klinik Psikofarm. Bül. Bul. Clin. Psychopharmacol.* 24, 176–179.
- Paccione, D. M. R., and Contessakislus, M. A. (1987). School phobia: Identification of subtypes as a prerequisite to treatment intervention. *Adolescence* 22, 377–384.
- Sherman, J., and Formanek, R. (1985). School phobia in a multiphobic family: the family that phobes together. *Child Adol. Soc. Work J.* 2, 114–124.
- Wetchler, J. L. (1986). Family therapy of school-focused problems: a macrosystemic perspective. *Contemp. Fam. Ther.* 8, 224–240.

Advantages of publishing in Frontiers



OPEN ACCESS

Articles are free to read
for greatest visibility
and readership



FAST PUBLICATION

Around 90 days
from submission
to decision



HIGH QUALITY PEER-REVIEW

Rigorous, collaborative,
and constructive
peer-review



TRANSPARENT PEER-REVIEW

Editors and reviewers
acknowledged by name
on published articles

Frontiers

Avenue du Tribunal-Fédéral 34
1005 Lausanne | Switzerland

Visit us: www.frontiersin.org

Contact us: info@frontiersin.org | +41 21 510 17 00



REPRODUCIBILITY OF RESEARCH

Support open data
and methods to enhance
research reproducibility



DIGITAL PUBLISHING

Articles designed
for optimal readership
across devices



FOLLOW US

@frontiersin



IMPACT METRICS

Advanced article metrics
track visibility across
digital media



EXTENSIVE PROMOTION

Marketing
and promotion
of impactful research



LOOP RESEARCH NETWORK

Our network
increases your
article's readership