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Risk for school refusal among autistic boys bullied at school: Investigating associations with social phobia and separation anxiety

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ABSTRACT

Autistic youth bullied at school are at risk for school refusal (SR), which may grow from emerging SR (ESR). SR and ESR have been associated with social phobia and separation anxiety among neurotypical youth but these associations have not been studied among autistic youth. The associations between both types of anxiety and in a sample of 71 autistic boys aged 6 to 18 years (M = 10.23, SD = 1.43). Eighty-two percent of boys reported being bullied at school, and 55% of these boys asked to stay home from school. Boys who asked to stay home had a significantly higher level of separation anxiety than boys who did not ask to stay home. There was no difference between these two groups with respect to levels of social phobia. At the item level, two of the four social phobia symptoms were significantly correlated with the request to stay home from school as were seven of the eight symptoms of separation anxiety. Results suggest that autistic boys bullied at school do not seek to avoid school because they are shy in social situations, but because they want to spend time with their parents. Implications for intervention are discussed.

KEYWORDS

Autism; bullying; school refusal; separation anxiety; social anxiety

Introduction

In a review of studies conducted primarily among neurotypical youth, bullying was identified as one of the many risk factors for school refusal (SR), and the desire to avoid school was considered a sign of emerging school refusal (ESR: Ingul, Havik, & Heyne, 2019). In addition to these findings across the wider population, many autistic youth[1] report that they experience bullying at school (Maïano, Normand, Salvas, Moullec, & Aimé, 2016), and one recent study found that more than a quarter of autistic youth who were bullied refused to attend school at some time due to bullying (McClemont, Morton, Gillis, & Romanczyk, 2020). Further, results of another study showed, even more specifically, that more than one half of another sample of autistic youth expressed a desire to avoid school the next day due to bullying (Bitsika, Heyne, & Sharpley, 2020).

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SR is the school attendance problem characterised by reluctance or refusal to attend school in conjunction with emotional distress (Heyne, Gren Landell, Melvin, & Gentle-Genitty, 2019). According to Ingul et al. (2019), ESR is distinguished from SR because the latter commonly involves a threshold for absence (e.g. 25% absence or more) or difficulty attending (severe difficulty) across a specified period (e.g. at least 2 weeks). ESR, on the other hand, refers to signs that SR may be developing but has not yet reached a threshold of absenteeism or difficulty attending, such as the request to stay home from school. ESR thus represents an important point for intervention. By intervening early to prevent SR, youth are shielded from the negative outcomes of established SR such as social withdrawal (Berg, 2002), mental health problems in late adolescence and adulthood (Berg & Jackson, 1985; Buitelaar, Van Andel, Duyx, & Van Strien, 1994; Flakierska-Praquin, Lindstrom, & Gillberg, 1997; McCune & Hynes, 2005), and lowered school attainments due to reduced learning time (Carroll, 2020).

The emotional distress associated with SR is often in the form of anxiety. Among neurotypical youth referred for treatment of SR, around one half meet the diagnostic criteria for an anxiety disorder (Heyne, Sauter, & Maynard, 2015). Non-referred youth displaying ESR or mild SR also experience symptoms of anxiety and meet diagnostic criteria for anxiety disorders (Egger, Costello, & Angold, 2003). The current study addresses two types of anxiety often associated with SR and ESR, namely social phobia and separation anxiety.

Among neurotypical youth, social phobia has been reported in relation to established SR (Bernstein, Warren, Massie, & Thuras, 1999; Blöte, Miers, Heyne, & Westenberg, 2015; Heyne et al., 2002; Mcshane, Walter, & Rey, 2001), emerging or mild SR (Egger et al., 2003), and risk for SR (Ingul et al., 2019). For example, a community sample of youth with emerging or mild SR was seven times more likely to be diagnosed with social phobia relative to those with no school attendance problem (Egger et al., 2003). It is typically older youth who refuse school to escape from aversive social and/or evaluative situations (Kearney & Albano, 2004) and who are diagnosed with social phobia upon referral for SR treatment (Last & Strauss, 1990). Autistic youth experience elevated levels of social phobia (Bellini, 2006; Kuusikko et al., 2008), higher than levels experienced by non-autistic peers (Bitsika & Sharpley, 2015), and the level of social phobia remains consistently high across the ages of 6 to 17 years (Bitsika, Sharpley, & Sarmukadam, in press). Furthermore, social phobia is one of the most common comorbid disorders among youth with an autism spectrum disorder (ASD; Capriola-Hall et al., 2020). However, the relationship between social phobia, autism, and ESR has not yet been reported.

Separation anxiety among neurotypical youth is associated with established SR (Heyne et al., 2002; Mcshane et al., 2001), emerging or mild SR (Egger et al., 2003), and the development of SR (Bagnell, 2011). For example, in Egger and colleagues' (2003) community sample, youth with emerging or mild SR were 11 times more likely to be diagnosed with separation anxiety relative to youth with no school attendance problem. Of the youth with emerging or mild SR, 18% worried about harm occurring to their parents and 17% worried about what would happen at home while they were at school. Youth displaying SR who had concurrent separation anxiety were found to be younger than those with concurrent social phobia (Last & Strauss, 1990). Autistic youth experience elevated levels of separation anxiety (Hallett et al., 2013), higher than their non-autistic peers (Bitsika & Sharpley, 2015), but levels of separation anxiety decrease across the ages

of 6 to 17 years (Bitsika et al., in press). Separation anxiety is among the most frequently reported anxiety disorders in youth with ASD (White, Oswald, Ollendick, & Scahill, 2009). However, the relationship between separation anxiety, autism, and ESR is yet to be reported.

Recently, there have been calls to examine the wide range of potential correlates of SR among autistic youth (Totsika et al., 2020), including the potentially important role of anxiety on the relationship between bullying and ESR (McClemont et al., 2020). According to Munkhaugen et al. (2019), examination of the variables associated with refusal to attend school can help tailor interventions for youth with autism and school attendance problems. Similarly, early intervention for autistic youth displaying ESR will be supported by the examination of variables associated with ESR, helping protect against severe and chronic SR and its negative outcomes. In particular, bullying experienced by autistic youth represents an opportunity for early intervention to protect against the development of SR (Ochi et al., 2020).

The primary aim of the current study was to examine associations between ESR and the presence of social phobia and separation anxiety among autistic youth who reported being bullied at school. Generalised anxiety has been studied in relation to ESR among autistic youth (Bitsika et al., 2020), but social phobia and separation anxiety have not. The value of early intervention for autistic youth displaying ESR and social phobia is underscored by studies of neurotypical youth showing that social phobia is associated with poor response to treatment for severe and chronic SR (Heyne, Sauter, Van Widenfelt, Vermeiren, & Westenberg, 2011; Layne, Bernstein, Egan, & Kushner, 2003; Mcshane, Walter, & Rey, 2004). The impact of separation anxiety on the outcome of treatment for chronic and severe SR is less clear (Heyne et al., 2015), although one study of adolescents suggests that it contributes to poorer treatment response (Layne et al., 2003).

A secondary aim of the study was to examine age-related trends in associations between ESR and the two types of anxiety. Age-related trends in social phobia and separation anxiety have been studied among autistic youth but not those displaying ESR. Due to the paucity of previous research on autism and ESR, the study was exploratory, with no hypotheses specified. The study focused on autistic boys because of the preponderance of autism among males relative to females (APA, 2013). The boys' social phobia and separation anxiety were measured via self-report because several studies have shown that parent reports may be biassed due to the parents' own anxiety states (e.g. Bitsika, Sharpley, Andronicos, & Agnew, 2015).

Methods

Participants

A total of 71 autistic boys and their mothers participated in the study, which was conducted in Queensland, Australia. Forty-nine boys attended elementary school (grades 1 to 7; *M* age = 10.3 years, *SD* = 1.5 years, range = 7 to 13 years) and 22 attended secondary school (grades 8 to 12; *n* = 22, *M* age = 14.6 years, *SD* = 1.2 years, range = 13 to 18 years). According to the reports of mothers, all the boys had received a formal diagnosis of ASD from a psychiatrist or paediatrician. The diagnosis was confirmed by a qualified state-registered clinical psychologist (author VB) and a score of at least 7 on the the Autism

Diagnostic Observation Schedule – Second Edition (ADOS-2; Lord et al., 2012) administered by a research assistant. All boys had a Full-Scale IQ of 70 or greater on the Wechsler Abbreviated Scale for Intelligence (WASI-II; Wechsler, 2011). The boys were born in Australia and the main language spoken at home was English. The parents of all but two boys were born in Australia. The data used in this study were drawn from a larger study, some of which have been reported previously in relation to different research questions (Bitsika et al., 2020).

Measures

Demographic Variables, Bullying, and Emerging School Refusal

The boys answered questions posed online about their age, grade at school, and experience of being bullied. The questions about bullying were developed in a face-to-face interview (see study by Bitsika & Sharpley, 2014). They addressed the following topics: whether the boy had been bullied (*yes/no*), how often he had been bullied (*not often, sometimes, nearly every day*), and whether he asked his parents if he could stay home from school the next day because of being bullied (*yes/no*). A positive response to this last question suggests risk for school refusal (Ingul et al., 2019) and was used as the operationalisation of ESR.

Social Phobia and Separation Anxiety

The Child and Adolescent Symptom Inventory – Revision 4 (CASI-4) was developed from the Child Symptom Inventory – 4th revision (Gadow & Sprafkin, 2010) and the Youth's Inventory (Gadow et al., 2002). It was designed to measure the presence of a range of disorders based on DSM-IV-TR criteria. Participants respond to CASI-4 items by indicating how frequently the item describes their overall behaviour, using the anchors 'never' (0), 'sometimes' (1), 'often' (2), or 'very often' (3). In this way the CASI-4 provides a dimensional measure of symptoms, relative to instruments eliciting categorical responses about the 'presence/absence' of symptoms. The CASI-4 was applied in two norming studies of autistic youth (Gadow et al., 2005; Weisbrot et al., 2005) and normative data for autistic youth are described in the CASI-4 Test Manual and elsewhere (Gadow & Sprafkin, 2010; Gadow et al., 2002). The CASI-4 has test–retest reliability of $r = .67$ over a 6 week period and internal consistency of .74 (Gadow & Sprafkin, 2010).

The CASI-4 includes anxiety subscales, two of which are labelled 'Social Phobia' and 'Separation Anxiety'. These subscales are consistent with the current diagnostic criteria for these disorders (i.e. DSM-5; APA, 2013) even though DSM-5 favours the term Social Anxiety Disorder over Social Phobia. Social Phobia was measured via the four items of the Social Phobia subscale (e.g. 'I try to avoid contact with strangers. I feel very shy'; 'I feel more anxious in social situations than most other people my age'; 'I feel excessively shy with my classmates'), with total scores ranging from 0 to 12. Separation anxiety was measured via the eight items of the Separation Anxiety subscale (e.g. 'I get very upset when I think I will be separated from my home or my parents'; 'I worry that my parents will be hurt or leave home and not come back'; 'I am afraid to go to sleep unless my Mum or Dad are nearby') with total scores ranging from 0 to 24. The internal consistency of the subscales is .78 for Social Phobia and .85 for Separation Anxiety (Gadow & Sprafkin, 2010).

Validity for these two subscales is .87 for Social Phobia and .95 for Separation Anxiety (Gadow & Sprafkin, 2010). Analyses were conducted for total raw scores on social phobia and separation anxiety, and for specific symptoms, to better understand the relationship between ESR and these two types of anxiety.

It is worth noting that various researchers have used self-report data to study the anxiety experienced by autistic youth (Bellini, 2004, 2006; Bitsika & Sharpley, 2016; Gadow et al., 2002; Lecavalier, Gadow, DeVincent, & Edwards, 2009). We also used self-reports of social phobia and separation anxiety because parent evaluations of their children's anxiety may be biased by the parents' own anxious states (Bitsika et al., 2015).

Procedure

Families (N = 150) who participated in the Bitsika et al. (2015) study on boys with ASD were invited by email to register interest in participating in the current study. If a boy expressed interest first, his parents were contacted to ascertain their interest in participation. All parents who responded to the invitation were mothers. There were 71 families who consented to participate, with consent provided by mothers and their sons.

The mothers were then contacted by telephone and interviewed by the first author to ensure that their sons met two key inclusion criteria: a formal diagnosis of ASD, and a formal assessment via WASI-II yielding an IQ of 70 or higher. After these criteria were met, mothers and their sons were given an online address so the boys could respond to the questions about demographics and bullying, and the CASI-4. They were informed that their responses would be kept confidential, and that only anonymous data would be reported. Ethical approval for this study was obtained from the Bond University Human Research Ethics Committee (BUHREC) in accordance with the Helsinki Declaration of 1964.

Statistical Analyses

Data were downloaded from the online data collection service and analysed in SPSS version 25. The CASI-4 Social Phobia and Separation Anxiety subscale scores were tested for normality and internal consistency (Cronbach Alpha, reported below). The principal statistical tests used to address the research questions were correlational analysis and MANOVA, each of which is relatively robust against the effects of nonnormality (Cohen, Cohen, West, & Aiken, 2003; Tabachnik & Fidell, 2013). Pearson correlations were calculated to determine if the boys' ages were significantly related to CASI-4 Social Phobia or Separation Anxiety scores. MANOVA tested for differences in CASI-4 Social Phobia and Separation Anxiety scores across school level (elementary *vs* secondary), having been bullied (yes, no), and ESR (i.e. boys asked their parents if they could stay home from school or not). Due to the differences in cell sizes for some variables, the Type II sums of Squares model was used in the MANOVA, and Pillai's Trace was the outcome index. Bootstrapping of 1,000 cases was applied to all analyses. When appropriate, Bonferroni adjustments were made to the p values to reduce the likelihood of a Type I error.

Results

Bullying, Emerging School Refusal, and Age

Fifty eight of the 71 autistic boys (81.7%) reported that they had been bullied at school. Thirty-two of the boys who reported being bullied (55.2%) exhibited ESR (i.e. asked their parents if they could stay home from school the next day because they were bullied at school). There were no significant correlations between age and having been bullied (r = .072, p = .550) or age and the presence of ESR (r = −.194, p = .105).

Social Phobia, Separation Anxiety, and Age

The Kolmogorov-Smirnoff and Shapiro-Wilk statistics indicated that there was no need to transform the data derived from the CASI-4 Social Phobia or Separation Anxiety subscales. Internal consistency (Cronbach Alpha) was .871 for the Social Phobia items and .932 for the Separation Anxiety items. The mean social phobia score across the 71 boys was 4.03 (SD = 3.59, range to 0 to 12) and the mean separation anxiety score was 5.93 (SD = 7.08, range = 0 to 24). There was a significant correlation between boys' age and separation anxiety (r = −.238, p = .046: a small effect size) but not between age and social phobia (r = −.078, p = .519). The correlation between age and separation anxiety did not reach the required level of significance when adjusted for multiple correlational analyses (i.e. .05/2 = .025).

Emerging School Refusal and Total Scores for Social Phobia and Separation Anxiety

A three-way MANOVA (elementary *vs* secondary school; reporting being bullied *vs* not bullied; ESR *vs* not ESR) was run on the CASI-4 Social Phobia and Separation Anxiety subscale scores for the sample of 71 autistic boys, with age as a covariate. Using the Type II Sums of Squares and Pillai's Trace because of the unequal cell sizes (Tabachnik & Fidell, 2013), there was a significant main effect for ESR, $F(2,59)$ = 7.914, p = .001, partial eta squared = .212, but no significant effect for school level, F = 1.416, p = .241, μ^2 = .046, or for being bullied, F = 2.549, p = .087, μ^2 = .080. In addition, there was no significant effect for boys' age, F = 1.282, p = .285, μ^2 = .042.

When examined at the univariate level, there was no significant effect of ESR status for scores on the Social Phobia subscale, $F(1,68)$ = 3.811, p = .056, μ^2 = .060. However, univariate analysis revealed that the 32 boys who were bullied and exhibited ESR had significantly higher scores on the Separation Anxiety subscale (M = 1.297, SD = .936) relative to the 26 boys who were bullied but did not exhibit ESR (M = .389, SD = .323), $F(1,68)$ = 15.864, p < .001, μ^2 = .289.

Emerging School Refusal and Symptoms of Social Phobia and Separation Anxiety

We conducted a more detailed analysis of the relationship between ESR and the two types of anxiety by examining responses to each item in the two CASI-4 subscales. These items represent DSM symptoms related to the respective anxiety disorders, Social Phobia and

Table 1. Spearman's correlations between CASI-4 social phobia and separation anxiety items and emerging school refusal in 71 autistic boys.

CASI-4 Social Phobia items	I try to avoid contact with strangers. I feel very shy	I feel more anxious in social situations than most other people my age	I feel excessively shy with my class mates	When I am in an uncomfortable social situation, I cry, freeze, or withdraw from interacting				
Spearman's rho with ESR	.275	.415*	.276	.381*				
CASI-4	Separation Anxiety items	I get very upset when I think I will be separated from my home or my parents	I worry that my parents will be hurt or leave home and not come back	I worry that some disaster like me getting lost or kidnapped will separate me from my parents	I try to avoid going to school so I can stay home with my parents	I worry about being left at home alone or with a carer	I am afraid to go to sleep unless my Mum or Dad are nearby	I have nightmares about being separated from my parents
I feel sick when I think I am going to be	separated from my home or my parents							
Spearman's rho with ESR	.503*	.415*	.478*	.688*	.477*	.457*	.411*	.297

* $p < .0038$. CASI-4 = Child and Adolescent Symptom Inventry-4th Ed; ESR = Emerging School Refusal.
10 to .29 = small effect; .30 to .49 = medium effect; .50 to 1.0 = large effect (Cohen, 1988)

Separation Anxiety Disorder. Spearman's correlation coefficients were calculated for each of the 4 Social Phobia items and the 8 Separation Anxiety items, correlated with the boys' self-reports of ESR. Table 1 presents the coefficients and indicates which of these were statistically significant after applying the Bonferroni-corrected p value of .05/13 = .0038. Based on the adjusted p value, 2 Social Phobia items and 7 Separation Anxiety items were associated with ESR as measured in this study. Each of these 9 items accounted for at least 10% of the variance in ESR. None of the 9 items were significantly correlated with the boys' ages.

Discussion

The primary aim of this study was to examine social phobia and separation anxiety among autistic youth at risk of SR based on a sign of ESR (i.e. asking to stay at home after bullying). Just over one half (55%) of the autistic boys who reported having been bullied asked their parents if they could stay home from school because of the bullying. Total scores for separation anxiety were found to be significantly higher among autistic youth displaying ESR relative to those not displaying ESR. There was no significant difference between the groups with respect to total scores for social phobia. At the item level, seven of the eight items about separation anxiety symptoms and two of the four items about social phobia symptoms were associated with ESR. We discuss the findings related to separation anxiety, followed by those related to social phobia.

The finding that separation anxiety was significantly related to ESR among the 58 boys who reported having been bullied is in keeping with studies of typically developing youth which show a relationship between separation anxiety and SR or ESR (e.g. Egger et al., 2003; Heyne et al., 2002). The separation anxiety item that had the largest correlation with ESR was 'I try to avoid going to school so I can stay home with my parents' (ρ = .688). This is a large correlation according to Cohen (1988) and it is not altogether surprising because the operationalisation of ESR included similar wording: 'Whether you asked your parents if you could *stay home from school* the next day because of being bullied.' At the same time, the association between ESR and the item 'I get very upset when I think I will be separated from my home or my parents' was also large (i.e. above .50; Cohen, 1988), and this item does not specify avoidance of school.

Taken together, the significant association between total separation anxiety and ESR, and the large associations between the two aforementioned items and ESR, could be interpreted as an expression of these boys' attachment to their parents. When working with autistic youth, it would be remiss to assume that signs of reluctance or refusal to attend school are principally due to the anxiety these youth may experience in the socially demanding environment of school. Rather, ESR may reflect the pleasure and security that these youth gain from being with their parents, although this is hypothetical at present. This points to the potential importance of parent involvement in early intervention for ESR. Indeed, in a study of treatment for youth anxiety, youth with moderate ASD symptoms benefitted more from cognitive behaviour therapy (CBT) in which parents were involved relative to CBT with the young person only (Puleo & Kendall, 2011). The authors of that study suggested that a potential benefit of parent involvement is an increase in at-home exposures. In the case of early intervention for ESR, the parents of autistic youth with separation anxiety could be helped to support their child's use of skills

to cope with periods of separation. This could contribute to maintained school attendance even after an experience of bullying. However, school-wide interventions to prevent bullying and support youth who have been bullied would also be required (Bitsika et al., 2020). A study of the views of autistic students (mostly boys) and their parents suggests bullying prevention relies on improved school policies and procedures which are clearly communicated to students, teachers, and parents (Carrington et al., 2017). For example, all students and parents should be helped to understand what counts as bullying, and supervised activities for autistic students during unstructured times such as lunch could reduce bullying rates.

There was no significant association between total social phobia and ESR among the 58 boys who reported having been bullied. This contrasts with prior studies of typically developing youth showing a relationship between social phobia and SR or ESR (e.g. Bernstein et al., 1999; Egger et al., 2003). At the same time, two of the four social phobia items showed a significant moderate correlation with ESR (i.e. 'I feel more anxious in social situations than most other people my age'; 'When I am in an uncomfortable social situation, I cry, freeze, or withdraw from interacting'). These two items reflect emotional distress and behavioural responses in social situations, whereas the other two items which were not correlated with ESR are about shyness (i.e. 'I try to avoid contact with strangers. I feel very shy'; 'I feel excessively shy with my classmates'). It may be that some autistic youth who report being bullied and ask to avoid school do so not because they are generally shy, seeking to avoid the social aspect of school, but because they lack knowledge and skills for responding to bullying other than by avoiding school. Related to this, a systematic review indicated that individuals with ASD and higher social phobia exhibited poorer social skills and functioning (Spain, Sin, Linder, McMahon, & Happé, 2018).

For autistic youth whose avoidance of school following bullying may stem from a limited repertoire of responses to bullying, early intervention that includes social skills training may be indicated. However, Lei and Russell (2020) remind us that a failure to address negative social performance beliefs may confirm autistic youths' beliefs 'that they are deficient in respect of social interaction skills, further exacerbating anxiety reactions and related behaviours' (p. x). The review by Spain et al. (2018) also pointed to diminished social motivation among individuals with ASD and social phobia. One explanation offered for diminished social motivation was that it is 'a consequence of negative social experiences, perhaps due to the impact of ASD characteristics, whereby individuals become less motivated to engage socially' (p. 64). In the case of ESR, the negative experience of bullying, whether the bullying was about the autistic youth's ASD characteristics or not, may reduce motivation for attending school. In these cases, early intervention to promote school engagement will be important, alongside school-wide interventions to prevent bullying (see Kearney, 2016).

A secondary aim of the current study was to to examine age-related trends. The presence of ESR was unrelated to the boys' age, mirroring results in a prior study of ESR among autistic youth (Bitsika et al., 2020). There was no significant main effect for age in the MANOVA predicting social phobia and separation anxiety, and no significant associations were found between age and responses to the CASI-4 items for any of the nine items that were significantly correlated with ESR. These findings diverge from studies of typically developing

youth which suggest that refusal to attend school to escape aversive social and/or evaluative situations is more typical of older youth (Kearney & Albano, 2004) and that separation anxiety is perhaps more typical of younger youth displaying SR (Last & Strauss, 1990).

There are various possible explanations for the lack of age-related patterns in the current study. The current study addressed *emerging* SR indicated by a request to stay from home school, as opposed to *established* SR which can be severe or chronic. In the time it takes for severe or chronic SR to develop, age-related associations with social phobia and separation anxiety may become more prominent. Also, the characteristics of autistic youth and the ensuing experiences they have in the school environment likely change the profile of risk factors and processes for the development of SR, relative to typically developing youth. In turn, age-related associations with social phobia and separation anxiety may change. If the lack of age-related associations among autistic youth is replicated in other studies, it underscores the need to consider the potential role of separation anxiety and social phobia in ESR among autistic youth of *all* ages. For example, the desire to be with parents during school time is not simply the experience of younger autistic youth.

A strength of the current study is the use of youths' self-reports of anxiety and ESR. The CASI-4, used to measure social phobia and separation anxiety, has established validity and reliability with autistic youth. Also, by directly asking youth about their desire to avoid school due to bullying, as an indication of ESR, we circumvented a limitation identified in a recent study which stated that parents may not be aware that victimisation could be a reason for their child to avoid school (McClemont et al., 2020). Another strength is the anonymous data-collection process, whereby data were gathered via online administration of questions as opposed to face-to-face interviews. This may have reduced socially desirable responding which could occur if youth were uncomfortable being interviewed about sensitive issues of social phobia and separation anxiety.

A key limitation of the current study is its focus on autistic boys to the exclusion of autistic girls. This limitation is accentuated by findings among neurotypical youth that boys and girls differ in their relationships with peers. For example, a meta-analysis by Gorrese and Ruggieri (2012) revealed that females were more attached to their peers than males. Differences in the extent to which girls and boys trust and communicate with peers might influence the likelihood of social phobia or separation anxiety influencing the desire to avoid school following bullying there. Investigation of the associations examined in the current sample of autistic boys, with a comparative sample of autistic girls, would help determine whether ESR among girls is influenced by separation anxiety and/or social phobia. Other study limitations include the lack of diversity in the youths' geographical and cultural background, lack of control for known family and parenting influences on bullying (Hong & Espelage, 2012), the cross-sectional nature of data collection, and the possibility of a Type II error due to sample size. Lastly, while the study focused on dimensional measures of social phobia and separation anxiety, future work might examine the associations between ESR and bullying among youth with diagnoses of Social Anxiety Disorder (Social Phobia) and Separation Anxiety Disorder.

In conclusion, the current study tentatively suggests that anxiety about separation from parents and/or the security of home warrants attention when planning early intervention to prevent autistic youth who show signs of ESR from developing severe and

chronic SR. This applies to autistic youth of all ages, not only those in their younger years. Some aspects of social phobia may also warrant attention when planning early intervention (e.g. crying, freezing, or withdrawing from interaction with others), while it appears that general shyness may not explain the desire to avoid school among autistic youth. Subsequent research should determine whether autistic girls who have been bullied and ask to stay home from school display similar or different patterns of anxiety. In addition, research conducted with autistic youth displaying severe and chronic SR would shed further light on the associations with social phobia and separation anxiety.

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Availability of Data and Material

Data are available from the corresponding author on request.

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