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The Netherlands

The @school project : developmental considerations in the design and delivery of cognitive-behavioural therapy for adolescent school refusal

Sauter, F.M.

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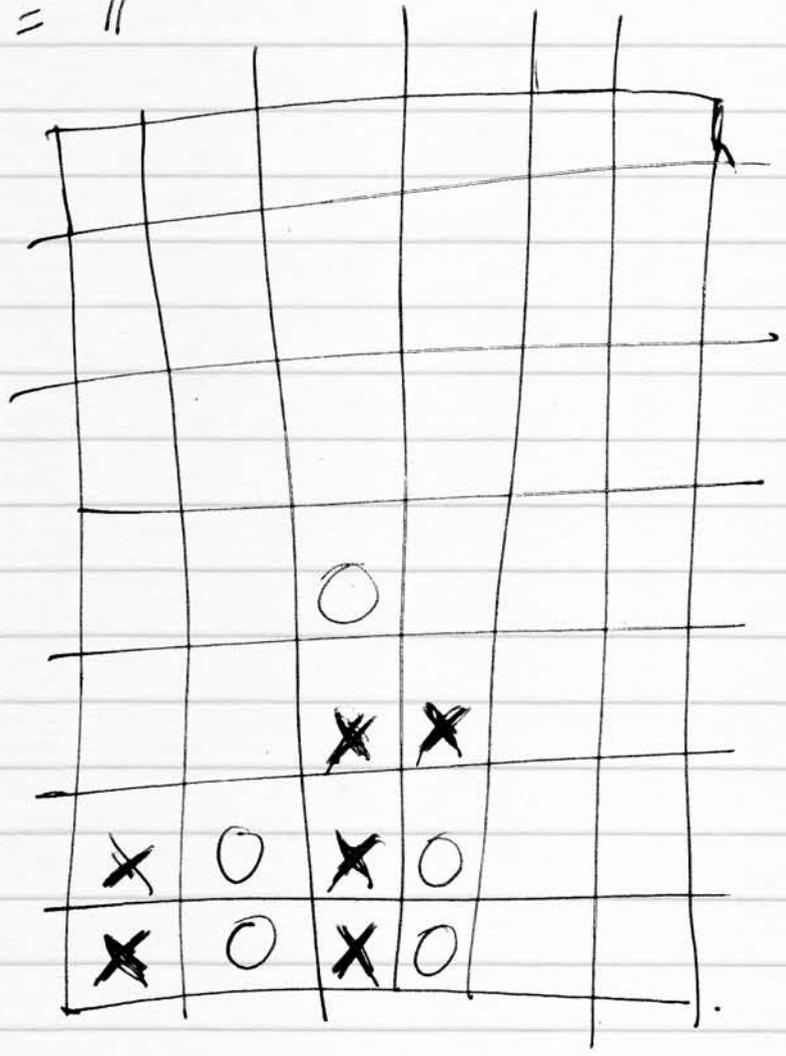
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Chapter 6

General Discussion

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School refusal is an attendance problem characterized by a young person's difficulty in going to school, accompanied by emotional distress on the part of the young person and parental attempts to return the young person to regular school attendance. Prolonged absence from school has serious short- and long-term consequences for young people, their families, and schools. Therefore, effective treatment of school refusal is essential. The encouraging results of numerous treatment outcome studies provide evidence for the efficacy of cognitive-behavioural therapy (CBT) for school refusal. Previous research has however indicated that adolescent school refusers may be particularly disturbed and harder to treat. To better account for the impact of adolescent developmental variables on a young person's engagement in treatment, an existing practitioner guide for school-refusing children and adolescents was modified and extended. In adapting the treatment, modules aimed at managing depression and family communication and problem-solving skills were included. In addition, clinicians were encouraged to consider developmentally-appropriate parent-involvement and the use of developmentally-appropriate language, activities, and materials. The studies presented in this dissertation described the preparation, implementation, and systematic evaluation of the resulting developmentally-appropriate CBT for adolescent school refusal. In this chapter, the key findings of each paper contained in this dissertation will be summarized and interpreted in the light of the literature. Recommendations for research and clinical practice will be made on the basis of these findings, and on the methodological strengths and limitations of the current research.

Preparation of the '@school project'

A review of developmental influences on the design and delivery of CBT for anxious adolescents

The first step in the preparation of a developmentally-appropriate CBT for adolescent school refusal was to review the available literature (Chapter 2). To enhance the applicability of the review for researchers and clinicians, the scope was broadened to adolescent anxiety disorders. Two research questions guided the literature review: 'why' is it important to take developmental factors into account when designing and delivering CBT for anxious adolescents?; and 'how' can clinicians and researchers working with anxious adolescents using CBT keep developmental factors in mind? A wide range of sources was inspected in order to answer these questions, including clinical and research publications from developmental psychology, developmental psychopathology, and clinical child and adolescent psychology.

Main findings

Researchers and clinicians regularly emphasize the potential role that developmental factors (e.g., biological, social-emotional, psychosocial, and cognitive) may play in both the aetiology of anxiety disorders in the adolescent period, and in an adolescent

client's engagement in CBT. Nonetheless, the review revealed that the interaction between adolescent developmental factors and treatment outcomes has rarely been examined in empirical studies. Indeed, adolescents are an underrepresented group in treatment outcome studies investigating CBT for anxiety. Given the important role of cognitive therapeutic techniques in CBT, CBT-relevant cognitive capacities may have particularly large implications for the engagement of adolescents in treatment, and hence their treatment outcomes. In addition, anxious adolescents' strivings for autonomy may contribute to ambivalence toward engaging in treatment, resistance to accepting support when having to confront feared stimuli, and even evasion of exposure tasks.

The suggestions made by researchers and clinicians in relation to treatment with anxious young people at different levels of development more generally, and in relation to CBT with anxious adolescents specifically, were reviewed and synthesized. Six key domains of developmentally-appropriate treatment design and delivery were identified and expanded upon: i) conducting assessment of CBT-relevant (cognitive) capacities; ii) planning treatment (preparing a cognitive-behavioural case formulation; selecting, sequencing and dosing treatment components; tailoring the selection and delivery of behavioural and cognitive therapeutic techniques); iii) enhancing motivation and engagement in treatment; iv) tailoring treatment language, materials, activities, and the tempo of treatment delivery; v) involving parents in treatment; and vi) involving peers in treatment.

Many of the recommendations emerging from the review are relevant to anxious young people at different levels of development (e.g., tailoring treatment language, materials, activities, and tempo according to the developmental level of the young person). Others are particularly relevant to working with anxious adolescent clients (e.g., attention to motivation for treatment; the involvement of peers in treatment; flexible treatment planning; assessment of CBT-relevant cognitive capacities). A key implication of the review which is particularly relevant for clinicians designing and delivering CBT for anxious adolescents is to weigh up what anxious adolescents 'want to do by themselves' and 'what they are able to do by themselves'. A balanced approach to treatment delivery may best facilitate adolescent clients' engagement in treatment for anxiety, and in particular, in exposure tasks. This balanced approach entails the clinician moving between being 'supportive' (i.e., letting the adolescent do it 'by themselves') and being 'directive' (i.e., providing adolescents with firm guidance when they are unable to do it 'by themselves'). Parents can also be encouraged to apply this 'developmentally-appropriate balance' when helping an anxious adolescent face feared situations. The review also stressed the importance of continued development and evaluation of cognitive-behavioural models of adolescent anxiety. Further, the systematic evaluation of developmentally-appropriate CBT for anxious adolescents, and in particular the assessment of the relationship between developmental factors and treatment outcomes, should also be a major focus of researchers working with

anxious children and adolescents. In response to these recommendations, the study reported in Chapter 5 addressed these two key issues.

Interpretation of the findings

The review focused on anxious adolescents more generally, rather than school-refusing adolescents specifically. However, the recommendations emerging from the review are applicable to the school refusal population, given the overlap in presentation and aetiology between anxiety and school refusal. In particular, the interaction between strivings for autonomy and anxiety-fuelled avoidance of school-related situations can have a significant impact on the way in which parents and clinicians facilitate the school attendance of adolescent school refusers. Many authors have suggested that difficulties associated with the achievement of autonomy may be related to the development and maintenance of school refusal in adolescents (Berg & Collins, 1974; Goldberg, 1977; Rubenstein & Hastings, 1980). According to Rubenstein & Hastings (1980), a “neurotic over-drive toward total independence” may lead some adolescents to rebel against all forms of external authority such as school staff, and parents insisting upon school attendance (p. 776). The more the parents and/or school staff enforce attendance, the more the young person may commit to showing that they cannot be controlled, and the more their determination to stay at home may grow (Taylor & Adelman, 1990). According to Goldberg (1977), adolescent school refusers in the throes of autonomy striving develop a style of “omnipotent magical thinking” (p. 503). This thinking style strengthens their resolve to resist attempts by parents or others to expose them to feared school-related situations. Further, Bryce and Baird (1986) suggested that the dysfunctional role that some adolescents play in their family (i.e., as the arbiter of conflicts between parents; as the primary support of one of the parents) may be conducive to the development and maintenance of such ‘magical’ thinking. For example, the young person may develop faulty beliefs about their ability to defy commands from others to face the “real, age-appropriate demands of school” (p. 202).

The combination of this over-assertion of autonomy in the family context, and the desire to avoid anxiety-provoking aspects of the school situation may make adolescents particularly successful in their refusal to attend school. This may render currently available CBTs for school refusal developed for use with both children and adolescents less effective with the adolescent age group. These currently available CBTs for school refusal tend to focus on the management of anxiety symptoms based on cognitive and behavioural models of the problem (i.e., negative cognitions cause emotional symptoms, hence challenging them will lead to reductions in anxiety and avoidance; avoidance is both classically and operantly conditioned, hence engaging in exposures will lead to habituation and the development of more adaptive responses to feared situations; Kendall, 2000). If autonomy issues are also implicated in the maintenance of the school refusal, additional therapeutic strategies may be needed

to facilitate the adolescent’s return to regular school attendance, and to empower the parents so that they are better able to facilitate the adolescent’s school attendance. A treatment component which may allow for this is training in, and practice of, family communication skills and family problem-solving skills (Heyne, King, & Tonge, 2004). These skills may increase the emotional connection between the adolescent and his/her parents and enhance the family’s capacity for flexibility in decision-making, especially around school attendance issues. Calmly and confidently engaging in discussions about plans for school attendance may result in reductions in family conflict and stress, which may in turn increase a young person’s willingness to co-operate with the plans. As such, a module aimed at the enhancement of family communication skills and family problem-solving skills was included in the ‘@school project’ treatment.

Another key finding emerging from the review was that CBT-relevant cognitive capacities such as self-reflection and insight may be essential to an adolescent client’s optimal engagement in CBT. Clinicians often estimate the extent of their clients’ cognitive capacities in order to tailor the delivery of cognitive therapeutic techniques, but these estimations may be biased by irrelevant and sometimes misleading factors (i.e., the physical development of the young person). Therefore, standardized means of assessing these cognitive capacities are important, alongside informal means of assessing cognitive capacities. Use of a standardized measure would also allow for the post-hoc exploration of the role of cognitive developmental factors in predicting treatment outcomes. Indeed, the Self-Reflection and Insight Scale for Youth (Chapter 3) was used in treatment outcome prediction analyses in the open trial of the ‘@ school project’ treatment (Chapter 5).

The development and psychometric evaluation of the Self-Reflection and Insight Scale for Youth

One of the aims of the current research was to examine the relationship between developmental factors and CBT outcomes. For this end, a self-report measure for young people which assessed proficiency in self-reflection and insight (the Self-Reflection and Insight Scale for Youth [SRIS-Y]) was developed, piloted, and evaluated in a community sample (Chapter 3).

Main findings

The study described in Chapter 3 comprised two smaller investigations which examined the comprehensibility of the SRIS-Y (n = 145) as well as the reliability and the structural, convergent, and divergent validity of the SRIS-Y (n = 215). The items of the SRIS-Y were found to be understandable for the participants. In addition, the main study hypothesis, that the structural, convergent, and divergent validity of the SRIS-Y would be adequate, was supported. The Insight subscale was negatively associated with internalizing problems, which may reflect that this subscale could indeed be

measuring psychologically adaptive self-awareness. Conversely, the Self-Reflection subscale was found to be positively associated with internalizing problems, which might indicate that this subscale assesses a maladaptive type of 'thinking about thinking', such as rumination. The Self-Reflection and Insight subscales also appeared to measure separate constructs, in that age or gender differences were only found in the Self-Reflection subscale scores. Taken together, these findings supported the use of the Insight subscale of the SRIS-Y with young people to measure CBT-relevant cognitive capacities in both research and clinical contexts.

Interpretation of the findings

The results of the study presented in Chapter 3 suggested that the SRIS-Y can provide a useful means of assessing CBT-relevant cognitive capacities in adolescents. If self-reflection and insight into thoughts, feelings, and behaviours are indeed associated with outcomes of treatments for adolescents, knowledge of a client's proficiency in these cognitive capacities can be used to guide clinicians' timing and delivery of cognitive and behavioural techniques (Grant, 2001). For example, young people with high levels of insight may require less guidance by the clinician in the application of sophisticated cognitive therapeutic techniques such as Socratic questioning. The potential overlap of the Self-Reflection subscale with maladaptive self-awareness also has implications for treatment planning. For example, if young people who have high levels of self-reflection at pre-treatment also engage in rumination, they can be stimulated by the clinician to adopt a more neutral, non-judgmental self-awareness through training in mindfulness strategies (Jones, Papadakis, Hogan, & Strauman, 2009).

In addition to the use of standardized measures, Holmbeck, O'Mahar, Abad, Colder, and Updegrave (2006) suggested clinicians informally assess cognitive capacities throughout the assessment process and in-session. For example, the clinician may 'probe' the young person's proficiency in CBT-relevant capacities such as social-perspective taking and self-reflection during the explanation of the cognitive model (e.g., "How would you think, or feel in this situation?"; "How might someone else see this situation?"). Further, the young person's participation in activities such as goal-setting may provide an indication of their ability to consider future consequences. Clinicians may also gain insights into the young person's alternative thinking ability through their work on problem-solving tasks (i.e., is the young person able to independently generate alternatives to problems?). Computerized or practical tasks may also provide an alternative means of assessing cognitive capacities. For example, the Raven's Coloured Progressive Matrices (Raven, Raven, & Court, 2003) and the MicroCog Assessment of Cognitive Functioning (Powell, Kaplan, Whitla, Catlin, & Funkenstein, 1993) have been used in several studies with adult clients to assess the relationship between cognitive capacities and response to treatment (Aharonovich, Nunes, & Hasin, 2003; Doubleday, King, & Papageorgiou, 2002). Ghafoerkhan (2009)

compared standardized and clinician-rated measures in order to establish the extent to which they both measure the same cognitive capacities necessary to engage in CBT. The results of this study which is currently in progress will hopefully further elucidate some of these issues related to the assessment of CBT-related cognitive capacities in young people.

The SRIS-Y offers researchers a tool with which to assess the moderating role of cognitive capacities in CBT outcomes of school-refusing adolescents. Other variables may also impact the relationship between self-reflection, insight, and treatment outcomes. Self-consciousness, a construct closely related to self-reflection (Grant, 2001), has been implicated in the maintenance of types of psychopathology frequently associated with adolescent school refusal. Private self-consciousness (i.e., an awareness of one's inner thoughts and feelings) has been shown to be strongly related to depression (Lewinsohn, Seeley, & Gotlib, 1997), while public self-consciousness (i.e., an awareness of the self as a social object) has been shown to be strongly related to social anxiety (Mor & Winquist, 2002). For example, a recent study by Higa, Phillips, Chorpita, & Daleiden (2008) examined the psychometric properties of a self-consciousness questionnaire in a sample of $n = 175$ young people (mean age = 11.5). The results of the study revealed that while public self-consciousness was strongly related to self-reported social anxiety, private self-consciousness was in fact related to self-reported positive affect. The authors suggested that this finding may have reflected the tendency of that subscale to measure a more neutral and even positive style of self-interest (i.e., similar to the Insight subscale of the SRIS-Y). In post-hoc analyses conducted with SRIS-Y data in the clinical sample of school-refusing adolescents (see Chapter 5 for a description of the sample), no significant differences were found in levels of insight or self-reflection in young people with or without a diagnosis of social anxiety disorder (primary or secondary), or young people with or without a mood disorder diagnosis (primary or secondary). These analyses were however conducted on small samples (N diagnosis social anxiety disorder = 13; N diagnosis mood disorder = 10), which may have resulted in a reduction in power to detect effects. Given that there may be interactions between psychopathology, self-reflection, and insight, other variables may need to be taken into account when exploring and interpreting the relationships between CBT-relevant cognitive capacities and the outcome of treatment. In preparing for a clinical trial of CBT for anxious young people, the inclusion of the SRIS-Y in the pre-treatment assessment battery may provide a means to explore variations in the mechanisms of change of young people diagnosed with different types of internalizing disorders.

Implementation and systematic evaluation of the '@school project'

A case study of developmentally-appropriate cognitive-behavioural therapy for adolescent school refusal

Following preparation of the '@school project' treatment protocol (Chapter 2) and the assessment battery (Chapter 3), the intervention was implemented and evaluated. Chapter 4 presented this evaluation in a single case study design. The descriptive nature of this study allowed for an in-depth exploration of the process of treatment with a 16-year-old female, her mother, and a school staff member. A particular emphasis of this chapter was the illustration of developmentally-appropriate treatment elements relevant to working with the challenging population of adolescent school refusers. In addition, the process by which a case formulation was used to guide treatment planning was described.

Main findings

The results of the case study provided initial support for the efficacy of the '@school project'. Statistically and clinically significant changes in attendance, anxious and depressive symptoms, and self-efficacy occurred between pre-treatment and post-treatment and were maintained at two-month follow-up. As there was no control condition, it was not possible to firmly conclude that the treatment was solely responsible for the changes in attendance, emotional symptoms, and self-efficacy. Indeed, non-specific factors (e.g., the treatment being spread across two academic years) may have influenced the treatment outcomes. However, it is also tenable that the developmentally-appropriate elements specific to the treatment which were implemented in this case contributed to the findings. For example, a module containing strategies aimed at addressing depression symptoms (commonly co-occurring with anxiety in adolescence; Ollendick, Jarrett, Grills-Taquechel, Hovey, & Wolff [2008]) was implemented. In addition, the impact of developmental transitions on the maintenance of the school refusal was addressed in the module on family communication and problem-solving.

Interpretation of the findings

This case study presents an example of how etiologically complex school refusal during adolescence can be. Individual, family, and school factors were all seen to play a role in the onset and maintenance of the problem. Informal accounts of the process of treatment by the '@school project' clinicians suggested that the development and sharing of the case formulation was a crucial part of the intervention. In particular, the use of a diagrammatical representation of the predisposing, precipitating, perpetuating, and protective factors involved in the adolescent's school refusal seemed to be helpful for both the clinicians and the clients. For the clinicians, the visually-presented case formulation allowed for a clear overview of key factors to

take into account in treatment planning, which could be adapted as the treatment progressed (Williams, Williams, & Appelon, 1997). For adolescents and their parents, the presentation of the case formulation diagram in the first session allowed for a shared understanding of the problem. It also helped them to understand the way in which treatment strategies would be implemented to tackle the factors involved in the maintenance of the problem. This 'shared understanding' seemed to create hope and increase adolescent and parent commitment to the treatment.

The modularized approach of the '@school project' allowed for the flexible delivery of several treatment strategies which were relevant to this particular case. Clinicians could also react to changes in the case formulation resulting from information gained during treatment. Allison, the subject of the case study, presented with somatic symptoms of anxiety. Therefore the 'stress management' module, which incorporated relaxation training, was planned. However, after engaging in activity scheduling, Allison began to engage in activities she found relaxing and enjoyable, and her somatic complaints decreased. Rather than applying the 'stress management' module regardless, other modules (i.e., those incorporating cognitive therapeutic strategies such as problem-solving and cognitive restructuring) were delivered. This allowed Allison and the clinician to work on other problems which had become more apparent during the treatment, such as Allison's fears of negative evaluation by peers.

A great advantage of applying modularized treatment is the flexibility to address the unique needs of the heterogeneous group of adolescents with school refusal. Modularized treatment combines the advantages of manualized treatment (i.e., replication studies are facilitated; internal validity is increased; clinician training is made easier and more effective; Wilson, 1996) with the benefits of prescriptive treatments (Weisz, Sandler, Durlak, & Anton, 2005). In prescriptive treatments, evidence-based treatment strategies are matched to specific aspects of a client's symptoms or problematic behaviours, allowing for substantial individualization (Chorpita, Daleiden, & Weisz, 2005; Chorpita & Southam-Gerow, 2006). For example, a recently developed modularized CBT for anxiety (Chorpita, 2007) consists of cognitive and behavioural therapeutic strategies which are known to be efficacious in the treatment of child anxiety (e.g., exposure; cognitive restructuring). These treatment strategies are grouped together thematically in the form of 'modules'. The treatment strategies contained within a module are explicitly described in a manualized treatment protocol. Further, recommendations for when and how to apply the treatment strategies (i.e., background information about the nature and process of the interventions included; how to introduce topics; discussion points; in-session activities; between-session activities) are also described in the protocol.

In modularized treatment, modules are selected and dosed depending on the specific characteristics of individual clients and the way in which their problems are seen to be maintained (i.e., the case formulation). However, as Wilson (1996) pointed out,

matching modules to clients is only useful if there are reliable and valid classification schemes to select the modules to 'best fit' the client's particular problems. Currently, there are few guidelines available to assist in the selection of dosing of modules in modularized treatments (B. Chorpita, personal communication, 13.10.2005). In the current study, and in other modularized treatments (i.e., Chorpita, 2007), the results of the pre-treatment assessment were used to guide the development of the case formulation and subsequent treatment planning. Clear strategies for 'individualizing' treatments are needed beyond pure clinical judgement and intuition (Ghaderi, 2006).

Another key issue which arose in Chapter 4 was the involvement of parents in treatment in order to facilitate school attendance. While the contribution of family factors to the onset and maintenance of childhood anxiety disorders is often cited (e.g., Chorpita & Barlow, 1998; Rapee, 1997), studies exploring the effect of parent involvement on treatment outcomes of CBT for anxious youth have shown mixed results (e.g., Barrett, Dadds, & Rapee, 1998; Bodden et al., 2008; Nauta, Scholing, Emmelkamp, & Minderaa, 2003). In terms of school refusal, some studies have suggested that parental involvement in CBT for school refusal was a possible reason for the efficacy of treatment (Blagg & Yule, 1984; King et al., 1998). However, the results of another study revealed that adding a parent component to individual treatment did not result in further improvements in outcome (Heyne et al., 2002).

Further, it has been suggested that involving parents in adolescent treatment, whether for internalizing or externalizing disorders, seems to be more beneficial for younger children than for adolescents (Dishion & Patterson, 1992; Hudson, Kendall, Coles, Robin, & Webb, 2002; Lewinsohn, Clarke, Hops, & Andrews, 1990). Due to the very nature of the adolescent period, which involves the development of autonomy and individuation from parents (Jenkins, 1981), parental involvement in therapy may have advantages and disadvantages. The increasing importance of peers as reinforcers and models, and the young person's desire to be less under parental supervision and control, may attenuate the usefulness of parental involvement in treatment (Hudson et al., 2002). However, parents can play an important role in supporting and guiding adolescents in their quest for autonomy and identity development. Working on the developmentally-appropriate roles that parents can play (i.e., by focusing on autonomy granting and negotiation skills) may allow for better generalizability and maintenance of treatment gains (Bögels & Siqueland, 2006).

In the treatment of school refusal, parents can be involved either as co-clinicians (i.e., guiding the young person in exposures to the feared situation or object between-sessions) and/or co-clients (i.e., engaging in behaviour modification techniques and cognitive restructuring to alter patterns of parental behaviour and cognitions) (Heyne & Rollings, 2002). In particular, parents can play a key role in encouraging, firmly if necessary, the young person to resume regular school attendance if the young person procrastinates or is reluctant (King et al., 1998). The reluctance or procrastination of adolescent school refusers may take extreme forms due to the

adolescent tasks and transitions related to autonomy development, as described in previous sections of this chapter. Therefore, parental involvement may be particularly useful in treatment with this age group, especially if adolescent clients are unable or unwilling to resume regular school attendance by themselves. Allison, the subject of the case study in Chapter 4, was an intelligent and mature girl who was highly motivated for treatment. However, informal accounts of the process of treatment by the clinicians suggested that adolescent school refusers referred to the '@school project' were often less motivated to return to regular school attendance, and less able to apply the therapeutic strategies to achieve this goal. The treatment of school refusal should certainly encourage self-determination and adolescent input into the plan for school return to a certain extent (Heyne, 2006; Taylor & Adelman, 1990). Nonetheless, allowing young people to determine all aspects of the school return and 'waiting until they are ready' to return to school may only serve to support maladaptive beliefs related to the autonomy and authority the young person attributes to him- or herself (Goldberg, 1977). Indeed, some researchers view parental involvement in treatment for school refusal as essential in addressing the 'manipulative struggle' for power and control between the parent and young person. Involving parents in treatment is seen as necessary to ensure that the young person resumes regular school attendance as soon as possible, and that parents 'regain' their authority (Hersov, 1985).

Bryce and Baird (1986) suggested that parental insistence that the adolescent attend school as soon as possible may be a key working ingredient in treatment. The authors positioned school refusal as "an expression of a maturational crisis" which resonates with a family crisis which family members are unable to cope with (p. 204). The authors suggested that the avoidance of the family crisis is a key maintaining factor of the school refusal. Family members can be exposed to the avoided situation by insisting on immediate return to regular school attendance. By encouraging the parents and the young person to work together on the task of planning the return to school, maladaptive interaction patterns in the family can be revealed and challenged. Clinicians can also then assist family members in the learning of new, more helpful ways of dealing with problems.

According to Bryce and Baird (1986), there are few practical contra-indications for their approach to managing school refusal in adolescence (i.e., when the young person is physically too big/strong to be 'forced' to school). However, facilitating the resumption of attendance can be considerably challenging for parents of school-refusing adolescents. Indeed, Elliot, (1999) reflects: "when confronted by a pleading, highly distressed child, parents often require much help and support to maintain a firm, sympathetic yet non-negotiable stance regarding the requirement to return to school" (p. 1006). Just as in the case of Allison, clinical impressions gained from the implementation of the '@school project' suggest that much parental patience, conviction, time, and energy, as well as support from clinicians, partners, friends, and family, was needed to consistently and successfully apply behavioural modification

strategies aimed at 'firmly encouraging' the adolescent to attend school. Some parents may find firmly insisting on attendance difficult or impossible to maintain. In the current study, giving firm guidance in terms of school attendance seemed to be particularly difficult for single parents, parents experiencing relationship difficulties, and parents who were dealing with personal psychological problems, an observation also cited in previous publications about school refusal (Heyne et al., 2004). For example, in the case described in Chapter 4, mother was encouraged to apply 'authoritative' behaviour modification strategies (i.e., giving effective instructions) in order to take more responsibility for Allison's school attendance. As the treatment progressed it became clear that mother was ambivalent about taking a firmer stance. She feared it would damage her relationship with Allison and also doubted her capacity to be consistent and convincing in her use of the behaviour modification strategies. Mother's engagement in the '@school project' seemed to be impeded by the external stressors in her life, which took up much of her time and energy during treatment.

An open trial of developmentally-appropriate cognitive-behavioural therapy for adolescent school refusal

The '@school project' treatment was systematically evaluated in an open trial (Chapter 5). Non-randomized research designs such as an open trial, while not considered the 'gold standard' in terms of the evaluation of treatment outcomes, do allow for practical and ethically acceptable investigations of interventions (Des Jarlais, Lyles, & Crepaz, 2004). The inclusion of this type of study design in the process of disseminating new interventions allows for a more complete picture of the existing evidence. In addition, these types of studies inform eventual adaptations to the treatment to make it more acceptable or effective, prior to eventual submission to a randomized clinical trial (Victoria, Habicht, & Bryce, 2004).

Main findings

The open trial of the '@school project' was conducted with 20 adolescents and their parents. Nineteen of the 20 adolescents completed the treatment. The hypothesis, that treatment would be associated with increased school attendance, reduced emotional symptoms, and increased adolescent and parental self-efficacy, was supported, and medium to large effect sizes were reported. Almost half (45%) of the adolescents attended school at least 80 percent of the time at follow-up, and as many were free of any anxiety disorder at two-month follow-up. There was a high remission rate of mood disorders. Social anxiety disorder was the most prevalent diagnosis still present at follow-up. Exploratory prediction analyses revealed that several developmental factors were related to treatment outcomes, namely clinician developmental appropriateness, insight, and functional autonomy. In addition, the treatment was found to be highly acceptable to adolescents, parents, school staff, and clinicians involved in the study.

Interpretation of the findings

The study presented in Chapter 5 provided further support for the efficacy of the '@school project' aimed at treating adolescent school refusal. Clinically significant improvements in attendance and internalizing problems were reported. Given that the repeated measures analyses revealed significant improvements in outcomes across time, the developmentally-appropriate treatment was beneficial for many of the adolescent school refusers who participated. A recent study by Alfano, Pina, Beidel, Ammerman, & Crosby (2009) also suggested that developmentally-appropriate adaptations to the CBT used in their study may have resulted in anxious adolescents profiting from treatment to a greater extent than expected.

Given that the aim of the study presented in Chapter 5 was to examine the effectiveness of an existing CBT for use with adolescent school refusers, a comparison can be made with the study by Heyne et al. (2002) which used the unmodified CBT for both children and adolescents. The treatment program in the Heyne et al. study also involved young people, their parents, and school staff; the measures of outcome were similar; and the post-treatment assessment was conducted at the same time (i.e., 2 weeks after treatment). The treatment applied in the Heyne et al. study was shorter (max. 8 sessions) and family communication skills, family problem-solving skills, and depression management skills were not included as treatment elements.

When looking at a subset of 13 to 14-year-old adolescents included in the Heyne et al. (2002) study ($n = 26$), the average attendance at post-treatment was 65 percent, as opposed to 41 percent in the current study. At follow-up, the attendance rates in both studies were similar (47% in the Heyne et al. sample vis-à-vis 48% in the current sample). In terms of diagnoses, 38 percent of adolescents in the Heyne et al. study were diagnosis-free at post treatment, relative to 25 percent in the current study. Again, at follow-up the rates of diagnostic remission were similar (42% in the Heyne et al. sample vis-à-vis 45% in the current sample). While these comparisons seem to indicate that both treatments achieved similar longer-term outcomes, several factors may confound the interpretation of the results. For example, the difference between the two studies in duration of the follow-up (on average, 4.5 months in the Heyne et al. study vis-à-vis 2.7 months in the current study). Further, the two studies were conducted in different countries, and there were age differences (M age: 13.3 in the Heyne et al. study; 14.7 in current study), different rates of comorbidity (M number of disorders: 1.85 in the Heyne et al. study; 2.25 in current study), and differences in levels of general functioning (M GAF: 56.1 in the Heyne et al. study; 50.5 in current study) (all differences significant at $p < .05$). Nonetheless, the finding that approximately half the adolescents were helped to return to regular attendance indicates that the '@school project' is a potentially useful intervention to combat this challenging problem.

Given the high remission rates of mood disorder diagnoses in the study, the addition of the module containing strategies to manage depression may have been a particularly potent developmentally-appropriate modification to the current

treatment. Previous literature on school refusal has emphasized that depression is an especially important factor to take into account when treating adolescent school refusers (Bernstein et al., 2000; Heyne, et al., 2004). Comorbid depression may be especially common amongst anxious adolescents, given that depression is highly prevalent during adolescence (Angold, Erkanli, Silberg, Eaves, & Costello, 2002). Studies have indicated that adolescent school refusers with comorbid depression show attenuated improvements following CBT, even when CBT is supplemented with medication (Bernstein et al., 2000; Bernstein, Hektner, Borchardt, & McMillan, 2001). Anxious-depressed school-refusing adolescents may respond less well to clinical trials of CBT, in part because the depression is another problem which requires attention in a time-limited treatment (Layne, Bernstein, Egan, & Kushner, 2003). Recommendations have been made in the literature to intensify treatments for this particular sub-population of school-refusing young people (Bernstein et al., 2001; Heyne et al., 2004). Therefore, a module related to the management of depression was added to the other, anxiety-focused modules in the current treatment. Eleven of the 19 adolescents completing treatment engaged in this module (M number of sessions = 2.53). All presented with symptoms of depression, and the majority of these adolescents were diagnosed with a mood disorder (7 of the 11 adolescents).

The reductions in mood diagnoses and depressive symptoms following treatment may be due to engagement in the module. Heyne et al. (2004) however suggested that a return to regular schooling (and the associated increases in activity levels, improved social involvement, and greater self efficacy) may also lead to improvements in depressed mood. In order to examine this hypothesis, Heyne and colleagues (2004) conducted post-hoc analyses on data from the Heyne et al. (2002) study. Specifically, the authors examined the differences in CDI scores of young people classified as responders and non-responders in terms of attendance levels at follow up (< than 90% attendance or > than 90% attendance). Although the two groups had equal levels of depressive symptoms at pre-treatment, the non-responders had significantly higher levels of depression at post-treatment. Similar post-hoc analyses were conducted on the data from the intent-to-treat sample in the current study. The results of the analyses revealed no significant differences between the responders and non-responders in terms of attendance levels at follow-up (< than 90% attendance or > than 90% attendance) in depressive symptoms or the presence or absence of any mood disorder diagnoses at pre-treatment, post-treatment, or follow-up. A tentative interpretation of this finding may be that the current treatment alleviated depressive symptoms and mood disorder diagnoses in adolescents, irrespective of the adolescents' actual school attendance.

The results of the study presented in Chapter 5 also raised some interesting questions about the relative influence of mood and anxiety disorders on treatment outcomes of CBT for adolescent school refusal. Previous studies with school-refusing adolescents have implicated depression as a key factor which may attenuate

the outcomes of treatment (Bernstein et al., 2000, 2001; Heyne et al., 2004). In the current study, the rate of remission from mood disorders was actually high, while adolescents with social anxiety disorder were less likely than adolescents diagnosed with other anxiety disorders to benefit from treatment. Given that Bernstein et al. (2001) reported that social anxiety disorder and avoidant disorder (which is seen to overlap extensively with social anxiety disorder; American Psychiatric Association, 1994) were the most prevalent diagnoses at one-year follow up, it may be that it was the features of social anxiety disorder, rather than the depressive symptoms, which attenuated the adolescents' receptiveness to the treatment in their study. Indeed, a significant proportion of young people with depression also suffer from social anxiety disorder (25–31%; Last, Strauss, & Francis, 1987).

The finding that school refusal related to social anxiety was particularly hard to treat may reflect the fact that socially-anxious adolescents present unique clinical challenges. Indeed, a recent study by Herbert et al. (2009) investigating the effectiveness of a group versus individual CBT for socially-anxious adolescents, found that a significant proportion of clients retained clinically significant symptoms at post treatment. The authors suggested that the reason why this population is 'hard to treat' may in part be related to changes occurring in the adolescent developmental period, such as increased comorbidity and high levels of self-focused attention. Pina and colleagues (2009) also suggested that young people who have trouble making friends may have more trouble regularly attending school than more socially skilled peers. In order to account for the impact of social factors in adolescence, psychoeducational material around social changes in the adolescent period was included in the '@school project' treatment. In addition, the treatment contained an optional module directed at the enhancement of social competencies relevant to the school situation. This module was well-utilized across all adolescents (M number of sessions in which the module was applied = 1.74 in the 11 adolescents who were administered the module) and it was applied in a significantly greater number of sessions with socially anxious young people as opposed to participants with other anxiety disorders, $t(12.92) = 3.61, p < .01$. However, the time-limited nature of the treatment may have prevented further work on the module which may have been useful for some socially anxious adolescents. If socially anxious young people in the current study received insufficient training in social competencies, exposures to social situations may have been less effective, due to negative reactions by others to their continued deficits in social skills (Layne et al., 2003). This in turn may have attenuated these clients' overall response to treatment.

Finally, the study presented in Chapter 5 was the first of its kind to examine the association between developmental factors and treatment outcome in adolescent clients, and specifically, in adolescent school refusers treated with CBT. Few studies have been published which systematically evaluate CBT for school refusal (Elliot, 1999), and only one previous study has examined the prediction of CBT outcomes in adolescent school refusers (i.e., Layne et al., 2003). Even in the broader field of

child and adolescent anxiety, predictors of treatment outcome are poorly understood (Liber, 2008). Increased knowledge of factors associated with a successful treatment response can aid in the assignment of young people to appropriate treatment interventions, and aid in establishing possible boundaries of the efficacy of the treatment (Southam-Gerow, Kendall, & Weersing, 2001). An interesting question which arose from the findings of the study is: Why were some developmental factors (i.e., insight; functional autonomy) associated with treatment outcomes, even though the treatment was designed to be developmentally-tailored to better meet the needs of adolescent clients? The aim of the current research was to enhance the effect of the treatment by including developmentally-appropriate treatment modules and encouraging clinicians to use developmentally-appropriate language, activities, and materials. Indeed, clinician developmental appropriateness was positively associated with improvements in attendance. This finding seemed to imply that the research aim had been achieved, in that the extent to which the clinician was developmentally-appropriate in their delivery of the treatment increased the likelihood of the resumption of regular school attendance. However, two developmental variables continued to influence treatment outcomes, potentially signifying that the treatment was not 'developmentally-appropriate' enough. A possible reason for this finding may be that the extent to which clinicians were able to deliver treatment in a developmentally-appropriate way was contingent upon the ease with which they could cater for developmental factors in treatment. For example, the cognitive capacities of the adolescent (i.e., insight) may have limited the extent to which they could participate in some elements of the treatment, despite the clinicians' attempts to deliver the materials in a developmentally-appropriate way. Similarly, autonomy strivings by the adolescent which were most apparent in parent-child interactions may have been difficult to address in the context of an individual CBT.

Methodological strengths and limitations of the studies

Strengths

A key strength of the research described in this dissertation is the empirically-based, iterative approach (Weisz, Southam-Gerow, Gordis, & Connor-Smith, 2003) to the deployment of the developmentally-appropriate treatment for school-refusing adolescents. A thorough literature review (Chapter 2) was conducted prior to the development of the treatment manual, in order to better be able to account for developmental issues in treatment design and delivery with adolescent school refusers. In this way, the resulting treatment manual was grounded in classic publications and informed by recent and relevant empirical studies. Then, assessment instruments were developed and adapted especially for the adolescent population, and were piloted in a community sample prior to the commencement of the clinical trial (e.g., Chapter 3) to ensure their acceptability and suitability for the sample. Finally, both the process of the treatment and treatment outcomes were explored (Chapters 4 and 5),

providing qualitative and quantitative data on the effects of treatment. In particular, the case study (Chapter 4) provided insights into the application of the treatment on a micro-level (e.g., specific events that might have been conducive to treatment effects in a particular client), and it allowed for a descriptive evaluation of the treatment. In both studies, statistically and clinically significant changes in symptoms between pre-treatment and post-treatment and follow-up were examined, allowing for an exploration of concrete and meaningful improvements in the adolescent clients' day-to-day functioning (Kendall, 1999; La Greca, Silverman, & Lochman, 2009).

Another strength of the current research was that the clinical trial was conducted in a way which facilitated both internal and external validity. Many procedures were implemented to increase the internal validity of the study via the promotion of treatment integrity. These procedures included extensive clinician training in the modularized CBT for school refusal, weekly supervision and bi-weekly intervision meetings for clinicians during the duration of the research, and the use of a treatment manual that delineated and described the key treatment strategies. A multi-method, multi-informant approach to assessment, seen to be essential to evaluating treatments for young people, was used in the current research (Ollendick & King, 1998). Both of the parents, the young person, and school staff completed psychometrically-adequate measures assessing relevant areas of functioning (e.g., school attendance; onset and maintenance of the school refusal; internalizing problems; self-efficacy; developmental factors; IQ; etc.). To promote external validity, a clinically-referred sample with high levels of diagnostic comorbidity and severe levels of non-attendance was recruited for the clinical trial (Chapter 5), increasing the generalizability of the results to other non-research settings. The 'structured flexibility' offered by the modularized treatment manuals was particularly appropriate for the population of adolescent school refusers, given the heterogeneity associated with both the presentation and aetiology of school refusal (Heyne, 2006), and the large intra- and inter-individual differences which characterize the adolescent period (Weisz & Hawley, 2002). The three-pronged approach utilized in the treatment (i.e., the involvement of the young person, parents, and school staff) allowed for an integrated, comprehensive approach aimed at addressing the range of aetiological factors commonly associated with school refusal (i.e., individual, family, and environmental factors; King, Ollendick, & Tonge, 1995). Finally, the treatment contained developmentally-appropriate modules which made it especially relevant to the sample studied. The components and implementation of these modules were the focus of Chapter 4. Feedback from adolescents, parents, school staff, and parents was assessed following treatment in order to establish the acceptability of the '@school project', answering calls in the literature to empirically examine whether participants involved in CBT for school refusal are satisfied with the intervention (King, Tonge, Heyne, & Ollendick, 2000).

Limitations

Several limitations of this research warrant consideration. First, small sample size was a limitation of the studies presented in Chapters 3 and 5 of this dissertation. It can be argued that the small sample sizes resulted in reduced power to detect effects, and that smaller effects may therefore not have been detected (Type II error; Lerman, 1996). While the number of tests conducted in the study presented in Chapter 5 would typically have required the use of the Bonferroni correction to reduce Type I error, a significance level of .05 was maintained. However, given that analyses on treatment efficacy conducted with intent-to-treat samples are a conservative estimate of treatment effect (Kendall & Flannery-Schroeder, 1998), the results presented in Chapter 5 can still be interpreted with some confidence.

Second, while the flexibility of the modularized treatment approach described in Chapters 4 and 5 can be a considerable advantage, it can also increase the variability in the treatment delivered to the clients. For example, some adolescents may have engaged in one session of the cognitive therapy module, whereas others may have engaged in this module in almost all sessions. This variability in the extent to which modules were delivered made establishing treatment adherence in the current research a complex process. A random sample of sessions across all clients was selected and viewed by independent observers, ensuring that some part of each module was observed and coded. This method of scoring adherence to modules may have underestimated the actual adherence to the modules (i.e., a large proportion of a module might have actually been covered over a number of sessions, but observers only viewed one session in which a small proportion of the module was covered). As yet, there are few guidelines in the literature regarding how to examine adherence to modularized treatments, or what criteria can be used to ascertain what level of adherence is 'adequate' (B. Chorpita, personal communication, 21.1.2008). To facilitate further replication of clinical trials of modularized treatments, it is essential that efficient and valid methods of assessing adherence to treatment are developed and reported in publications.

The preparation and implementation of the treatment was executed in a step-wise fashion, and culminated in an empirically-valid open trial. Nevertheless, a need still exists for a randomized clinical trial (RCT) in order to remedy several limitations of the open trial. The open trial presented in Chapter 5 was an uncontrolled study in which the treatment was not compared against another treatment condition or a wait-list. Consequently, the observed improvement could have been attributable to non-specific treatment factors (e.g., attention) or the passage of time. In addition, the sample used in the open trial was ethnically homogenous (i.e., all young people were of Dutch origin). The utility and applicability of the treatment for school refusers from other ethnic backgrounds cannot therefore be established yet. Efforts should be made to make the treatment more accessible to non-Dutch school refusers, given that previous studies have suggested that schools with high rates of ethnic minority

students had higher absence rates (Rothman, 2001). Indeed, school refusal may be particularly prevalent in schools with high rates of students from ethnic minorities (Sauter, 2004). There was a low response rate by fathers to the post-treatment and follow-up assessments in the open trial, despite efforts to actively involve them in the study. As fathers may be particularly important role models for adolescents, and given that involving fathers in treatment may be essential in combating adolescent anxiety (Bögels & Siqueland, 2006), it can be especially important to involve fathers in all aspects of research into the treatment of anxiety in young people.

Clinical and research implications of the studies

Implications for clinical practice

The results of the studies presented in this dissertation suggest that clinicians need to take into account several characteristics of adolescent school refusers prior to starting CBT. Diagnostic status (e.g., presence of a mood disorder, presence of social anxiety disorder), developmental factors (e.g., level of insight, autonomy), and family factors (e.g., dysfunctional interactions resulting from adolescent strivings for autonomy; stressors in the parents' lives which may attenuate their ability to facilitate school attendance) may all impact on the engagement of the adolescent in treatment, and therefore may influence treatment outcomes. Clinicians need to assess these factors pre-treatment, preferably from multiple perspectives (i.e., parent- and self-report) and using multiple methods (i.e., using standardized measures and more informal means), and incorporate them in the case formulation. A pictorial method of presenting the case formulation as discussed in Chapter 4 may allow clinicians to develop clear yet flexible representations of the key factors involved in the onset and maintenance of the school refusal (Williams et al., 1997).

A second key factor to consider in the treatment of adolescent school refusers arising from the current research is the issue of school placement. In the Netherlands, the fact that a student may only repeat one year of high school has large implications for treatment. This is especially so in cases where the adolescent has already failed the year and, due to poor attendance, is facing the prospect of failing the year again. This impact of school placement issues such as this was illustrated in the case study presented in Chapter 4. Although schools are legally bound to provide students in this situation with alternative educational options, it was often the case in the current research that clinicians, in collaboration with education welfare officers, the young person, and his/her parents, spent much time arranging the school placement of the young person. In some cases, these school-placement issues left less time for other school attendance-related preparations. If the arrangement of a suitable school placement proved to be difficult, the motivation of the adolescent for attending the old school often waned, and tensions between parents and school staff arose. In future, clinicians working with school-refusing adolescents may consider prioritizing the organization and confirmation of school placement prior to commencing treatment.

A third clinical implication of the current research regards the involvement of the education welfare service in the treatment. While the education welfare service was not involved in the case study described in Chapter 4, informal accounts by the '@school project' clinicians revealed that education welfare officers were involved to some extent in the majority of cases referred to the open trial (Chapter 5). In the Netherlands, school staff report cases of 'disallowed absenteeism' to the local education welfare service. An education welfare officer then consults with the school and the parents and young person to determine the next course of action. This can be a warning in the form of a 'motivational' meeting with the young person and parents, or an official referral to juvenile court. In the latter situation, the young person is required to go to juvenile court where a judge decides on the consequences of the absenteeism: a fine for parents, referral to child and adolescent mental health care services, or community service (Ministerie van Onderwijs, Cultuur en Wetenschap, 2009). In the current research, informal accounts from the clients revealed that some of the families had had no previous contact with the education welfare service, some had a received a warning and no further action, and others were due to go to juvenile court in the near future. Families also experienced their contact with the education welfare service very differently, with some finding it a useful experience and others feeling angry, frightened, or misunderstood. In the interest of the internal validity of the current research, clinicians tried to ensure that contact with education welfare services was well-managed. This reduced the chance that the clients received mixed messages about school attendance (e.g., the education welfare officer suggesting that the adolescent 'return to full-time schooling immediately', when clinicians had negotiated a gradual build-up of attendance with the school and the family). Based on the experience accumulated during the '@school project', a number of steps can be undertaken by clinicians in order to optimize the collaboration with education welfare services: i) gather information about the current involvement of the education welfare service in the case; ii) consider, together with the education welfare officer and school staff, what the available options are in terms of the involvement of the education welfare officer in treatment (e.g., no involvement; only monitoring of the attendance; a motivational meeting with the adolescent and parents; etc); iii) weigh up the potential advantages and disadvantages of the involvement of the education welfare officer in treatment (e.g., may stimulate the parents' motivation to increase their efforts in facilitating the attendance of their child; may result in increased anxiety and pressure on the adolescent which may delay the resumption of regular school attendance); and iv) facilitate the communication between parents, school staff, and the education welfare officer if necessary so that the three parties will continue to monitor and manage the school refusal when the treatment has concluded

Fourth, clinicians may also choose to supplement the modules contained in the '@school project' treatment with additional therapeutic strategies in order to better meet the needs of the heterogeneous group of adolescent school refusers. As

discussed earlier in this section, the results of the studies contained in Chapter 2 and 4 indicated that some adolescent school refusers and their parents may benefit from extra attention in the treatment to family therapeutic strategies. Although the module focusing on family communication and problem-solving contained cognitive and behavioural therapeutic techniques for family work, there was little time for more in-depth family work during the small number of conjoint (parent-adolescent) sessions in the treatment (M number of sessions in which the family communication and problem-solving module was applied across the sample = 1.71). In addition, if parents had difficulties in applying the behaviour modification strategies, clinicians were limited in the application of other treatment strategies due to the restrictions of the clinical trial (i.e., support not delineated in the manual would be considered non-adherence to the treatment). In cases such as these, additional techniques may also be useful (e.g., attention to parental psychopathology; assistance from social work or other professionals who can come to the family home each morning and supervise the process of escorting the adolescent to school; involvement of education welfare services to apply 'pressure' in the form of motivational meetings with the young person and/or parents). When working with socially anxious adolescents, it may be important to spend more time on micro and macro social competencies and strengthening peer relations before the resumption of school attendance (Place, Hulsmeier, Davis, & Taylor, 2000). The addition of extra practice opportunities for coping with social fears, including additional exposure to social situations via group therapeutic work, may also result in an enhancement of outcomes for this population (Herbert et al., 2009). Another treatment component of possible benefit to school-refusing adolescents with social anxiety may be parent training to reduce expressed emotion (e.g., parent over-involvement, criticism, and hostility). Given that isolated socially anxious young people are likely to have most contact with their parents, parent-child interaction which is high in expressed emotion may contribute to the maintenance of the social anxiety (Garcia-Lopez, Muela, Espinosa-Fernandez, & Diaz-Castela, 2009).

Further, the exclusion criteria in the current research meant that adolescents with a low IQ, autism spectrum problems, and those refusing to come to the clinic were not included in the sample. To better cater for these groups, the treatment may need to be lengthened or made more intensive (Heyne et al., 2004). Modules focusing on academic skills (e.g., homework skills, planning) may also be useful for some adolescent school refusers (i.e., those with autism spectrum problems and ADHD). In addition, in cases where time is very limited (e.g., there is a restricted number of sessions able to be provided by the clinician or service), clinicians may like to integrate the modules which focus on school attendance (i.e., exposure) and the management of depression (e.g., activity scheduling). The integration of these key strategies may enhance the efficiency of the treatment and leave more time to address other modules (e.g., enhancement of social competence). Such a 'transdiagnostic' approach utilizes the technique of behavioural activation to address both anxious

and depressive complaints. Behavioural activation can increase the young person's access to natural sources of reinforcement, as well as break the cycle of avoidance of distressing or anxiety-provoking situations which can lead to withdrawal and passivity. After an assessment is made of the avoidant behavioural patterns related to anxiety and/or depressive symptoms (i.e., not getting out of bed in the morning to avoid feeling 'down'; not riding to school anymore to avoid having to answer questions from peers about their absence), adolescents can be instructed in more adaptive approach behaviours to engage in the distressing or anxiety-provoking situations using a graduated or hierarchical plan (Chu, Colognori, Weissman, & Bannon, 2009; Weersing, Gonzalez, Campo & Lucas, 2008).

Finally, clinicians working with adolescent school refusers can incorporate the additional therapeutic strategies discussed in the previous paragraphs in a 'stepped-care approach' to treatment (Heyne et al., 2004). Stepped-care approaches involve the initial delivery of less intensive treatment to all clients, followed by a stepwise application of increasingly intensive approaches for clients who respond less well to the preceding intervention (Bower & Gilbody, 2005). While no stepped-care interventions for childhood anxiety disorders have been evaluated, several authors have suggested that this approach may be useful for working with this population (e.g., Ronan, Finnis, & Johnston, 2005; Van der Leeden et al., 2010). Heyne and colleagues (2004) also suggest a 'stages of treatment' approach to the treatment of school refusal, in which diagnostic information is used to implement a stagewise intervention. The first stage in this approach involves the selection of the initial treatment, which according to the available empirical evidence, should be CBT. Depending on the age of the adolescent client and the severity of the problem, this can be done via parent work (e.g., in cases with a younger age and/or minimal emotional distress), or individual treatment (e.g., in cases with more disturbed functioning), or a combination of these two plus school consultation. Cases with severe depression may also warrant the prescription of medication (normally a second stage intervention). Stage two involves the management of partial response through the combination of CBT with pharmacological treatment, and/or an extended trial of CBT. Stage three involves treatment for refractory clients, and may incorporate further treatment using CBT+medication, and additional family and parent work (e.g., parental stress management; family therapy) and alternative pharmacological treatments. The final and fourth stage involves the implementation of booster sessions to maintain treatment gains and prevent relapse, and for some families (e.g., single parent families) the implementation of longer psychosocial treatments to provide extra support.

Based on the above recommendations, and informed by the findings of the current dissertation, the first step of intervention for anxious adolescent school refusers could be the current 16 session version of the '@school project' treatment. The treatment was found to be effective for a large proportion of the clients in increasing rates of attendance and reducing emotional symptoms. In addition,

adolescents, parents, and school staff found the treatment to be acceptable, and clinicians also reported high rates of satisfaction with the treatment. If adolescents are still diagnosed with anxiety and/or are attending school < 90% of the time at the end of treatment, clinicians can evaluate the utility of applying one or more other interventions. The selection of the interventions can be informed by the case formulation and the wishes of the adolescent and parents, and can include: i) extra sessions of the current treatment; ii) more frequent sessions of the current treatment (e.g., daily; Tolin et al., 2009); iii) more family work; iv) the application of other services in the home environment to support the parents in the facilitation of the school refusal; v) additional modules (e.g., homework skills; enhancing social competency); vi) medication (anxiolytics or antidepressants); and vii) day- or inpatient treatment. Indeed, of the nine non-responders in the current sample, one adolescent received extra sessions of the '@school treatment', two adolescents were prescribed medication (anti-depressants), two adolescents were referred to other clinics to be admitted as day-patients, and four adolescents were admitted as inpatients of Curium-LUMC.

Implications for future research

A key research implication emerging from the studies presented in this dissertation is the need for a larger RCT with a longer follow-up period to further investigate the efficacy of the developmentally-appropriate CBT for adolescent school refusal. The '@school project' treatment could then be compared with other control conditions, including a waitlist, an attention-control placebo, or other interventions. The inclusion of a control condition would rule out the possibility that the gains observed in the current study were due to the passage of time or non-specific effects. This in turn would increase the evidence base for CBT as the treatment of choice for school refusal (King et al., 2000). Longer-term follow-ups could confirm whether there may be a delayed or maintained treatment effect after treatment has concluded (cf. Hudson et al., 2002). In preparing for such a RCT, researchers should include measures of developmental factors which may have an impact on treatment outcomes for school-refusing adolescents (i.e., the Self-Reflection and Insight Scale for Youth [SRIS-Y]; Chapter 5). Further research into the SRIS-Y with a clinical population could confirm whether the Self-Reflection subscale may indeed be tapping into a more ruminative type of (private) self-consciousness, and whether the Insight subscale may reflect an adaptive style of self-consciousness relevant to positive outcomes of CBT.

Future researchers should also recruit a larger sample into the RCT to permit an extensive evaluation of factors mediating and moderating treatment outcome, as well as analyses of the component elements of the treatment. These are seen as essential steps in the research-based dissemination of effective interventions (La Greca et al., 2009; Weisz et al., 2005). Even the most carefully developed programs are likely to be more beneficial for some groups, and less beneficial for others. Indeed,

some clients may even 'deteriorate' during the course of treatment (Barlow, 2010). However, most treatment outcome studies with young people focus on whether a treatment works and not how a treatment achieves its effects (mediation), for whom it is most effective (moderation), or which elements of treatment are most efficacious (i.e., component analysis) (Holmbeck et al., 2006; Weisz & Hawley, 2002). Exploring 'how' CBT for adolescent school refusal produces change, 'for whom' CBT for adolescent school refusal is most efficacious, and 'which' elements of CBT for adolescent school refusal are most potent may allow for future matching of clients to appropriate treatments, and prioritization of the most effective treatment components (Pina et al., 2009).

The current research, as well as previous studies into the factors influencing treatment outcomes for school refusal in adolescents (e.g., Layne et al., 2003), can inform the identification of several candidate moderators of treatment outcome. The severity of the school attendance problem (i.e., how low the attendance rate is pre-treatment) has been shown in previous studies to be associated with poorer outcomes (Layne et al., 2003). Post-hoc analyses of data from the current research failed to find an association between treatment outcome and the pre-treatment rate of attendance or length of time absent from school prior to referral. Future studies with larger samples, and hence more power to detect effects, are required to confirm these post-hoc analyses. In addition, further prediction studies are needed to confirm the relationship found between treatment outcomes and the cognitive capacities and level of autonomy of school-refusing adolescents. It may be interesting to examine whether developmental factors examined in the current study are specifically relevant to the treatment of adolescent school refusers, or if they are generally relevant to the treatment of adolescents with anxiety and/or mood disorders. Future studies may also shed light on the relationship between mood disorders, social anxiety disorder, and treatment outcome in adolescent school refusers. Other potential moderators of treatment include additional developmental variables (e.g., biological, social-emotional, and psychosocial development), parental and family factors (e.g., parental psychopathology, family functioning), and individual factors (e.g., ethnicity, diagnostic status).

A number of candidate mediators of treatment outcome also arise from the current research and past literature on school refusal. For example, what effect the timing of the return to regular school attendance has on treatment outcome is a useful avenue for further research. The issue of the timing and nature of school return in treatment for school refusal has long been a contentious issue in the literature. Some authors have recommended immediate, forced return (e.g., Kennedy, 1965), and others have opted for a return 'when the young person is ready' (e.g., Patterson, 1965). The '@school project' emphasised the principle of 'early return following adequate preparation'. That is to say, school return was planned for half-way through treatment after preparation by the adolescent, parents, and school staff

with behavioural and cognitive therapeutic strategies. However, informal accounts of the process of treatment by the '@school project' clinicians suggested that there was considerable variability in the timing of the return to regular school attendance. When the resumption of regular attendance was planned was often dependant on a number of factors (e.g., practical considerations such as school placement; the desire of the adolescent to return to school using a very slow and graduated build-up of attendance; pressure from the education welfare officer for immediate return to school; etc.). The influence of the timing of school return on treatment outcomes in adolescents is unclear and requires further investigation. Other possible mediators of outcomes of CBT for adolescent school refusal include non-specific factors (e.g., therapeutic alliance; client motivation or readiness for change), treatment-related improvements in self-efficacy of the adolescent and/or their parents, and treatment-related improvements in family problem-solving related to school attendance.

As yet, very few studies into CBT with children and adolescents have conducted component analyses to determine the relative efficacy of behavioural vis-à-vis cognitive strategies, or other treatment components (Drinkwater & Stewart, 2002; Stallard, 2009; Weisz et al., 2005). One previous study by Silverman and colleagues (1999) investigated the relative efficacy of behaviourally-based therapeutic strategies (e.g., reinforcement) and more cognitively-focused therapeutic strategies (e.g., self-evaluation) for anxious children and adolescents aged 6 to 16 years. The authors suggested that because both treatments were equally effective in reducing anxious symptoms, either of the approaches can be effective in treating anxiety in young people. Given the modular design of the '@school project' treatment, whereby clients received different components of treatment depending on the case formulation, it would be interesting to explore which modules were related to greater changes in outcome measures. For example, did adolescents who were classified as responders receive certain modules more often than non-responders? Further research and post-hoc analyses of the data arising from the current research may provide insights into which elements in the current treatment are actually necessary for symptom improvements, and whether more 'streamlined' treatment plans involving fewer modules are sufficient to produce change (Hollon, Garber, & Shelton, 2005; Weisz et al., 2005). In addition, researchers could further investigate the use of standardized means of assigning modules to clients (i.e., based on clinical cut-offs on questionnaires administered pre-treatment; King et al., 2000). The effectiveness of a stepped-care approach to treating adolescent school refusal (i.e., including other interventions such as family therapy or medication following non-response to treatment) also requires empirical investigation.

Conclusion

The severe short- and long-term consequences of prolonged absence from school calls for effective intervention for anxious adolescent school refusers. This dissertation described the preparation, implementation, and systematic evaluation of a developmentally-appropriate cognitive-behavioural therapy (CBT) for adolescent school refusal, the '@school project'. The studies presented in this dissertation provide evidence of a conscientious, comprehensive approach to the development and implementation of the treatment, which is required for the empirically-valid dissemination of innovative interventions. The developmentally-appropriate CBT for adolescent school refusal was associated with reduced emotional distress and increased attendance and self-efficacy in a significant proportion of the adolescents participating in the treatment. Moreover, although some adolescents and parents may have found elements of the treatment aimed at the resumption of regular school challenging, the treatment was found to be highly acceptable to adolescents, parents, school staff, and clinicians. The findings of the current research are of importance to both clinicians and researchers working with the challenging population of school-refusing adolescents and their parents. While further studies are needed to confirm the generalizability of the results of this research, it is clear that developmental tasks and transitions inherent to the adolescent period (i.e., autonomy development), and the needs and abilities of school-refusing adolescents (i.e., cognitive capacities) can influence an adolescent's treatment outcomes. The '@school project' may therefore provide a valuable and accessible first step for adolescent school refusers towards the resumption of a normal and adaptive developmental trajectory via regular school attendance, reduced internalizing problems, and increased self-efficacy.

