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

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# The @school project

Developmental Considerations in the  
Design and Delivery of Cognitive-Behavioural Therapy  
for Adolescent School Refusal

Floor M. Sauter

**The @school project**  
**Developmental Considerations in the**  
**Design and Delivery of Cognitive-Behavioural Therapy**  
**for Adolescent School Refusal**

**Proefschrift**

Ter verkrijging van  
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**“If I have the belief that I can do it,  
I shall surely acquire the capacity to do it  
even if I may not have it at the beginning”**

Mohandas Karamchand Gandhi

**“He is able who thinks he is able”**

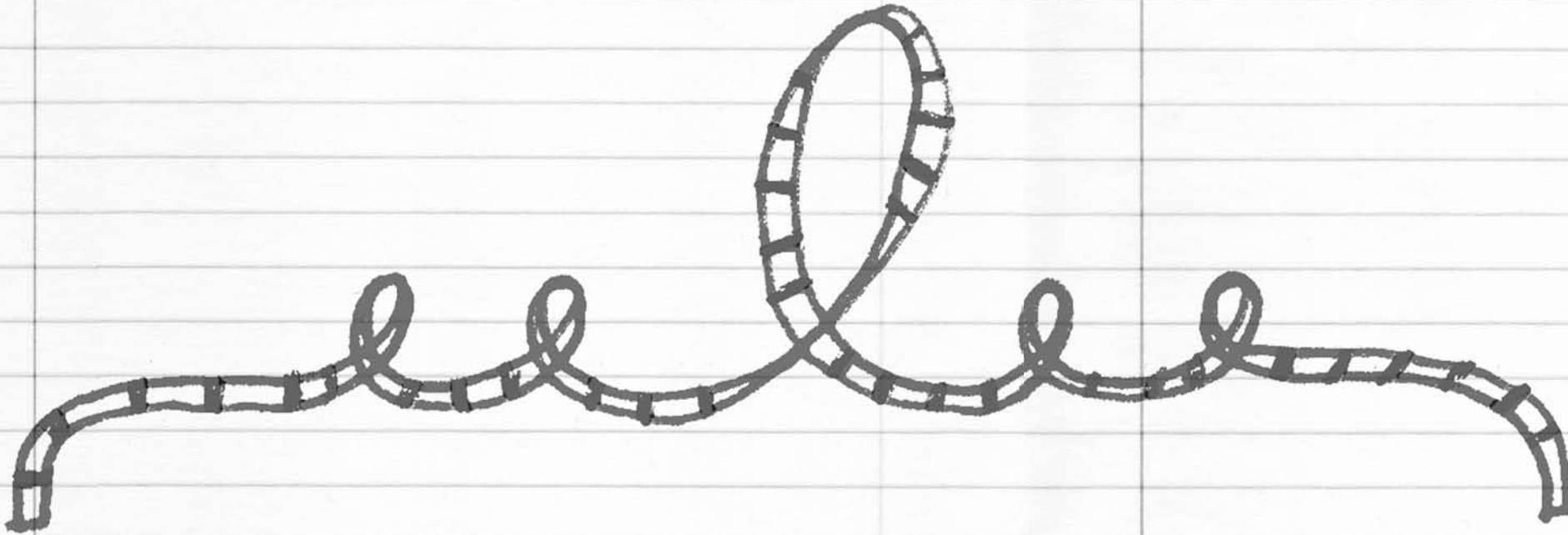
Buddha

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# Chapter 1

## General Introduction



Anxiety-based school refusal<sup>1</sup> 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.

"...It all started when I was going from my Second Year...in High School to my Third Year. We have to pick subjects for our GCSE's [tertiary entrance exams] and so when I had a meeting with my Guidance teacher, he told me Third Year was going to be brilliant for me...The reality was different. I had serious trouble with my German teacher and so asked to be moved class...but they refused bluntly. Over this period of time I decided to just go to the school library during German classes...Nothing was said, apart from I was told I was breaking the law by doing so...Then I started becoming scared of school. I would have panic attacks on the way...I couldn't concentrate on anything...Then I started getting picked on...After a while, I was feeling really low and so...I told my mum I wasn't going anymore. She phoned the school constantly and got meetings but it was too late. I felt like nothing would help me be there. I felt allergic to the building...I love learning and I'm a good student but I can't be at school and moving school doesn't seem like a very good option. I'm scared I'll make a mess of my life but I see no other way out..."  
Rosie, aged 15 (Scared of school, 2005)

Persistent school refusal poses a significant threat to a young person's social, emotional, and academic development and can jeopardize longer-term occupational functioning and mental health (Flakierska-Praquin, Lindström, & Gillberg, 1997; Heyne, King, Tonge, & Cooper, 2001). In addition, successful management of school refusal often presents a challenge to parents, school staff, and mental health professionals (Heyne & King, 2004). Young people with school refusal frequently meet diagnostic criteria for internalizing psychological disorders (Egger, Costello, & Angold, 2003; Hersov, 1985). As such, cognitive and behavioural techniques used in treating internalizing disorders, such as the restructuring of cognitions and systematic desensitization, are often incorporated in treatments for school refusal (Heyne & Rollings, 2002; Kearney, 2003). Cognitive-behavioural therapy (CBT) is considered an efficacious intervention for school refusal in young people, with encouraging empirical evidence to support its application (e.g., Heyne et al., 2002; King et al., 1998). CBT for school refusal is aimed at promoting regular and voluntary attendance and relieving emotional symptoms such as anxiety and depression. Individual and parent sessions, as well as consultation with schools, are seen as important parts of the treatment.

In adolescence, school refusal is particularly prevalent, complex, and treatment-resistant (Heyne, 1999; Last, Hansen, & Franco, 1998). Indeed, school refusal appears to be more common among adolescents relative to children (e.g.,

Kearney, Eisen, & Silverman, 1995; Last, 1992). In terms of severity, greater levels of absenteeism have been reported for school-refusing adolescents than for school-refusing children (Hansen, Sanders, Massaro, & Last, 1998). Given that adolescents with anxiety are often diagnosed with several concurrent anxiety disorders, as well as depression (Ollendick, Jarrett, Grills-Taquechel, Hovey, & Wolff, 2008), adolescent school refusers may exhibit high levels of comorbidity. These factors may be related to inferior treatment response in adolescent school refusers. Several studies have reported that school-refusing adolescents improve to a lesser extent following treatment, relative to younger children (Heyne, 1999; Last et al., 1998). Furthermore, the adolescent period is associated with a broad range of intrapersonal (e.g., cognitive development), interpersonal (e.g., autonomy strivings in the family context), and environmental changes (e.g., approaching school-leaving age) which have the potential to effect the therapeutic process and the outcomes of treatment (Holmbeck, O'Mahar, Abad, Colder, & Updegrave, 2006).

An awareness of biological, social-emotional, psychosocial, and cognitive factors specific to adolescence is therefore essential when working with school-refusing adolescents. By conducting 'developmentally-appropriate CBT', or cognitive-behavioural interventions which take into account the developmental level of an individual client, clinicians can increase their chances of successfully engaging young people in treatment (Holmbeck et al., 2006). Indeed, developmentally-appropriate treatments for anxious adolescents are beginning to emerge (e.g., Kendall, Choudhury, Hudson, & Webb, 2002; Siqueland, Rynn, & Diamond, 2005). While several treatment outcome studies utilizing CBT for school refusal have been published (e.g., Heyne et al., 2002; King et al., 1998), the efficacy of a developmentally-appropriate approach with adolescent school refusers has not yet been investigated.

Therefore, the major aims of the current research were: (i) to prepare for an open trial of a developmentally-appropriate CBT for adolescent school refusal by developing a modularized treatment manual, and developing measures which allowed for the examination of developmental predictors of treatment outcome; (ii) to implement this CBT and determine, by means of the open trial, whether the CBT for adolescent school refusal was associated with improvements in attendance, emotional symptoms, and self-efficacy, and was acceptable for young people, parents, school staff, and clinicians; and (iii) to explore whether the outcomes of the CBT for adolescent school refusal were influenced by developmental factors such as the adolescents' cognitive capacities and autonomy development, and the clinicians' developmentally-appropriate delivery of the treatment. Below, an overview of the characteristics, prevalence, and management of various types of school attendance problems is provided, focusing in particular on school refusal in adolescence<sup>2</sup>.

<sup>2</sup> Elements of this chapter have appeared previously in Sauter (2004). For a recent and complete review of a range of issues related to school refusal, see Heyne (2006).

<sup>1</sup> Hereafter known as school refusal.

Following this overview, the hypotheses of the current research and an outline of this dissertation are presented.

## School attendance problems

Going to school is a fact of life for most children and adolescents in westernized countries where school attendance is compulsory. Young people spend a large part of the day at school and it is the place where most of their academic, social, and personal interactions take place (Patton, Bond, Butler, & Glover, 2003). Additionally, schools are important societal institutions for the education of young people, for the stimulation of positive outcomes, and for the prevention of problem behaviours (Felner et al., 2001; Greenberg et al., 2003). For many families, the biggest dilemmas faced in the morning are deciding which clothes to wear and what to pack in the daily lunch box. In some households, however, school attendance can be a source of upset, conflict, and crisis for all concerned. Given the substantial consequences of non-attendance for young people, effective identification and management of school attendance problems is of essential importance.

### Distinguishing between problematic versus non-problematic absence

An important issue in the accurate identification of school attendance problems is the distinction between 'non-problematic' and 'problematic' absenteeism. Frequently, signalling of problematic absenteeism is focused on the rate of non-attendance, as well as whether the absence from school is legitimate (i.e., with reasons agreed upon by school and parents, such as illness, funerals, and religious holidays). Problematic absenteeism therefore excludes legitimate and temporary absences due to infrequently occurring events that can be compensated for at a later date (i.e., with extra class work). Kearney (2003) suggested the following criteria for determining problematic absenteeism: (a) if a school-age youth has missed most (> 50%) of school time for at least two weeks; or (b) if a disturbance in the young person's or family's daily routine for a period of at least two weeks is caused by the difficulties associated with going to school. Other studies have reported attendance rates of between 15 and 25 percent as being problematic (e.g., Bernstein et al., 2000; Galloway, 1985). In Heyne and colleagues' (2002) treatment outcome study, a rate of 90 percent attendance (calculated by tallying the number of half days the young person was present in the two weeks prior to the assessment) was reported as a 'successful' outcome. Attendance of less than 90 percent attendance was regarded as 'non-successful'.

In distinguishing between 'problematic' and 'non-problematic' attendance, the Law on Compulsory Education [Leerplichtwet] in The Netherlands makes an initial distinction between 'disallowed' and 'allowed' absences. The latter refers to absences due to illness or special circumstances such as funerals or religious occasions. In addition, the rate of non-attendance is also taken into account: a pupil may have up to 10 'allowed absences' (with permission) a year. Disallowed absences

(for all absences without permission) of more than three continuous days or 1/8<sup>th</sup> of lesson time in four weeks must be reported to the local education welfare service [Regionaal Bureau Leerplicht] (Overheid.nl, 2009).

Despite these legally defined criteria, many schools and educational institutions in the Netherlands often determine and apply their own criteria for what level of absenteeism is regarded as problematic (Bos, Ruijters, & Visscher, 1992). Further, school attendance records are not uniformly kept across Dutch schools (Steketee, Mak, & Tierolf, 2009). When and how school staff take action in cases of disallowed absenteeism (e.g., contacting education welfare services) often depends on the individual schools' policy and regulations (Regionaal Bureau Leerplicht – Zuid-Holland Noord [RBL], 2003). Many school staff fail to report absenteeism in the early stages and only contact education welfare services if the absenteeism is chronic (RBL, 2003). A negative consequence of this practice is that the attendance problem may become increasingly difficult to treat. Research has suggested that the longer young people are absent from school, the more likely it is that they will consider themselves unable to cope with various aspects of school, and the more difficult it is to get them to resume regular attendance (Okuyama, Ikada, Kuribayashi, & Kaneko, 1999; Valles & Oddy, 1984).

### Prevalence of problematic versus non-problematic absence

Reported rates of school non-attendance (both problematic and non-problematic) vary within the literature. Estimated international rates of non-attendance range from 9 to 20 percent of young people absent from school at any given time, depending on the definition of absenteeism used (Kearney, 2001). Higher rates of non-attendance are often reported for high school students relative to primary school students. Epstein and Sheldon (2002) reported an average daily absenteeism rate of seven percent in 12 American high schools. Similarly, Bos and colleagues (1992) reported a rate of absenteeism of 9.1 percent in a sample of 36 high schools in The Netherlands. A survey by the Dutch Institute for Public Opinion and Market Research found an average non-attendance rate in Dutch high schools of 7.9 percent (Nederlandse Instituut voor de Publieke Opinie en het Marktonderzoek [TNS-NIPO], 2002).

Data on the prevalence of problematic non-attendance is scarce. A recent Dutch study reported that 5.5 percent of 345 primary school students surveyed were absent from school without a valid reason (Vuijk, Heyne, & Van Efferen, 2010). Research into school absenteeism in the first four years of high school in The Netherlands indicated that the national average of unexplained and therefore presumably 'disallowed' absenteeism at any time was 2.9 percent (TNS-NIPO, 2002). In a more recent survey, the total rate of problematic absenteeism for the school year 2003-2004 as estimated by school staff from 14 Dutch high schools, was found to be 12 percent (Sauter, 2004).



## Differentiation amongst types of problematic absenteeism

Differentiating between the different types of problematic absenteeism is an important consideration for the successful management of school attendance problems. While some scholars do not support the differentiation between types of school attendance problems (e.g., Lauchlan, 2003; Lyon & Colter, 2007), research suggests that different types of attendance problems may have different developmental pathways and aetiologies (Berg, 2002; Kearney, 2001), and may therefore require different approaches to management (Paccione-Dyszlewski & Contessa-Kislus, 1987; Stickney & Miltenberger, 1998). In the Dutch language, the expressions 'schoolweigeren' [school refusal], 'ongoorloofd schoolverzuim' [disallowed school absenteeism], 'spijbelen' [truancy], 'school fobie' [school phobia], and 'school ziekte' [school sickness] are often used interchangeably when referring to the unexplained and problematic absence of a young person from school. Similarly, terms such as school phobia, separation anxiety, school avoidance, psychoneurotic truancy, school reluctance, and truancy have all been used to describe problematic absenteeism (Heyne, 2006). Inconsistent labelling of school attendance problems may result in confusing and even erroneous information being accumulated about different types of problematic absenteeism (Heyne & King, 2004; Kearney, 2003; Stickney & Miltenberger, 1998).

A functional model of school attendance problems developed by Kearney and colleagues (Kearney, 2002; Kearney & Albano, 2004; Kearney, Lemos, & Silverman, 2006; Kearney & Silverman, 1996) allows for distinctions to be made between types of problematic absenteeism. The model identifies four functions served by a young person's refusal to attend school: (a) avoidance of the experience of anxiety or fearfulness related to attending school; (b) avoidance of social situations that are feared or which cause anxiety; (c) attention-seeking or bringing about a reduction in the feeling of separation anxiety; and (d) enjoyment of rewarding experiences that school non-attendance may bring. Kearney also developed a tool to assess these four functions of problematic absenteeism: the School Refusal Assessment Scale (SRAS; Kearney, 1993) and its revision (SRAS-R; Kearney, 2002). The SRAS-R aims to identify the functions of the young person's absence from school, so that prescribed treatments can be assigned.

Although the SRAS-R and its associated functional profiles provide a useful framework for conceptualizing and addressing non-attendance, another approach to distinguishing between different types of problematic school absenteeism is often applied. Types of problematic absenteeism can also be differentiated based on their aetiology, phenomenology, and contributing factors, rather than based solely on the function that the behaviour serves for the individual. This approach yields three categories of school attendance problems: truancy, school refusal, and school

withdrawal (Berg, 2002; Elliot, 1999; Heyne et al., 2001; Lauchlan, 2003)<sup>3</sup>. Following a brief discussion of truancy and school withdrawal, the characteristics, prevalence, and treatment of school refusal will be further examined.

## Truancy

Child-motivated absenteeism involves a young person's refusal to attend school and/or their difficulty with remaining in classes for an entire day (Kearney & Silverman, 1990). Truancy refers to child-motivated absence which is characterized by unlawful school non-attendance without the knowledge and consent of the parent(s). Attempts are made by the young person to conceal the non-attendance from parents and school staff (Kearney, 2003). Barth's (1986) description of 16-year-old Judy illustrates some of the features of truancy:

"...she rarely attends school for a whole day or on a Monday or Friday. Instead, she prefers to drink with her boyfriend or frequent the shopping malls with friends...Judy surely enjoys the pleasures of non-attendance... [she]...gets few rewards from attending class and lacks self-management strategies for dealing with the many frustrations of school."  
(Barth, 1986, p. 225)

Previous research has demonstrated a relationship between truancy and academic underachievement, as well as psychopathology such as conduct disorders and hyperactivity disorders (cf. Berg, 2002). Studies into rates of absence due to truancy report that approximately three to four percent of students truant on any given day, depending on the definition of truancy used and the time of the school year (Berg, 1992; Bos et al., 1992). Truancy-related absenteeism has been reported to be less common in primary schools than in high schools (Galloway, 1982, 1985). Case reports in the literature have indicated that several strategies administered by parents or school staff are useful in addressing truancy-based school absenteeism, including close supervision and surveillance of students, behaviour contracts, contingency management, and rewards for good behaviour (Bell, Rosen, & Dynlacht, 1994; Berg, 1985; Berg, 2002; Epstein & Sheldon, 2002; Kearney & Silverman, 1999; MacDonald, Gallimore, & MacDonald, 1970; Noonan & Thibeault, 1974). Treatment approaches for truancy can also involve consultation with external community agencies (Hanson & Hoelt, 1982; Mattison, 2002; Murphy & Wolkind, 1996). For example, educational welfare officers (i.e., akin to the Dutch 'leerplichtambtenaar') can make home visits and are involved in the judicial procedures that can be a result of truancy (Berg, 1985; Wright & Wardle, 1996).

<sup>3</sup> The existence of a mixed type of absenteeism, whereby young people display a combination of school refusal and truancy characteristics, as well as features of school withdrawal, has been reported in previous studies, though rarely in clinical situations (Boots, Foster, Brown, & Berg, 1990). It will therefore not be further investigated in the present research.

### School withdrawal

According to Kearney (2003), parent-motivated absenteeism is considered problematic when the school does not accept the reasons given by the parent for the young person's absence. School withdrawal is parent-motivated absenteeism, in that it is associated with parental or caregiver ambivalence or opposition to the young person attending school regularly (Kahn & Nursten, 1962). For example, sickness can be used as an excuse for the non-attendance while the young person actually stays at home to look after or provide company for family member(s), or works outside the home during school hours (Teasley, 2004). The following vignette illustrates this type of problematic absenteeism:

"Another possible reason for non-attendance...is the pupil staying at home to look after their sick parent. Related to this may be that the pupil's parents are not fit or competent enough to organize their child in the mornings to get ready for school." (Lauchlan, 2003, p. 136)

Due to the lack of research into school withdrawal, there is relatively little known about the aetiology, prevalence, and treatment of this type of school attendance problem. Research in Great Britain by Galloway (1985) found that between 1974 and 1976, 11 to 15 percent of young people aged 5 to 11 years, and 13 to 17 percent of young people aged 12 to 16 years were persistently absent from school with their parents' knowledge, consent and approval (analogous to school withdrawal). Absences with parental knowledge and consent were almost equally common in primary and high schools (59% and 51% respectively; Galloway, 1982, 1985). Strategies drawn from research into parental involvement in schooling may inform approaches to managing school withdrawal. Research has shown that parent monitoring of attendance and parental contributions to the education of their child are significantly associated with decreased absenteeism (Anderson, Christenson, Sinclair, & Lehr, 2004; Astone & McLanahan, 1991; McNeal, 1999). Alternatively, school staff may choose to refer families of young people not attending due to school withdrawal to external agencies such as social services or social work to acquire financial and mental health assistance (Barth, 1986; Berg, 2002; Teasley, 2004).

### School refusal

School refusal involves a young person's difficulty in going to school, together with emotional disturbance on the part of the young person and parental attempts to get the young person to go to school (Heyne & King, 2004). School refusal can be gradual or sudden in onset, and certain triggers may be related to its occurrence, such as stressful events at school or in the family (Berg, 2002; Egger et al., 2003; Heyne et al., 2002). Berg and colleagues (Berg, 2002; Berg et al., 1985) developed a number of criteria to define school refusal, based on research into attendance problems. These criteria include: (a) reluctance or refusal to attend school often leading to prolonged

absence; (b) the young person usually remaining at home during school hours rather than concealing the problem from parents; (c) displays of emotional upset at the prospect of attending school (e.g., somatic complaints, anxiety); (d) an absence of severe antisocial behaviour beyond resistance to attempts to get them to go to school; and (e) reasonable parental efforts to secure the young person's attendance at school. The following vignette characterizes some of the features of school refusal:

"...Nick complained of headache and nausea...At that time...his mother... expressed extreme frustration at not being able to coax Nick into returning to school...he remained indoors the entire time, [and] left the house only when accompanied by a parent..." (Paccione-Dyszlewski & Contessa-Kislus, 1987, p. 379)

Bools and colleagues (1990) found that half of their sample of school-refusing young people displayed symptoms of anxiety and/or depression. Similarly, Buitelaar, Van Aniel, Duyx, and Van Strien (1994) found that an anxiety disorder was the most common diagnosis in a sample of 25 day-patient adolescents with school refusal. In their study of school attendance problems in a community sample, Berg and colleagues (1993) found that approximately one-fifth of the non-attending young people sampled met the criteria for an anxiety or mood disorder (including overanxious and generalized anxiety disorder, phobias, and depression) according to the DSM-III-R (American Psychiatric Association, 1980).

A key characteristic of school refusal is that it is marked by heterogeneity in its presentation (Heyne, 2006). For example, some school-refusing young people are absent for several months, others attend school irregularly, and yet again others attend school but consistently arrive late. In samples of school-refusing young people, a wide range of anxiety disorders are found to be present, including social anxiety, separation anxiety, generalized anxiety, and anxiety disorder not otherwise specified. School refusal is also associated with mood disorders such as depression (Bools et al., 1990; Buitelaar et al., 1994; Flakierska-Praquin et al., 1997), especially in adolescence (Baker & Wills, 1978). Young people with school refusal often have problems with social contacts (e.g., being bullied, difficulty in making friends; Buitelaar et al., 1994; Egger et al., 2003). Family factors such as parental stress, parental psychopathology, marital tension, and family conflict have also been linked to the development and maintenance of school refusal (Heyne, 2006).

In international research into the prevalence of school refusal, rates between 0.1 to 25 percent have been cited, depending on factors such as the population studied and the criteria used to define school refusal (Fremont, 2003; Heyne & King, 2004). Previous studies have reported equal rates of school refusal-related non-attendance in both primary and high school students (e.g., Galloway, 1982, 1985). In the Netherlands, Vuijk et al. (2010) reported a prevalence of 2.0 percent in their sample of Dutch primary school aged children. A lower prevalence was reported by

the staff of 14 Dutch high schools in the Duin and Bollenstreek region (0.6% of all cases of problematic absenteeism; Sauter, 2004). In clinically-referred samples, the prevalence of school refusal varies between five percent and 16 percent, with higher rates often found in adolescent populations (Burke & Silverman, 1987; McShane, Walter, & Rey, 2001).

### Effects of absence from school due to school refusal

School refusal impacts negatively on young people, their parents, and school staff. Short-term consequences of school refusal for the young person include academic underachievement, social isolation, and problems with peer relationships (Hersov, 1972; Heyne et al., 2001). Long-term consequences of school refusal can include employment difficulties, antisocial behaviour, and a higher rate of psychiatric illnesses such as depression and anxiety in adulthood (Berg & Jackson, 1985; Bools et al., 1990). In a ten-year follow-up study by Berg (1970), adults who refused to attend school in childhood were found to experience adjustment problems in the home and work environments, as well as problematic relationships with peers. Extra expenses due to lost work time, as well as the daily battle in getting the young person to go to school can all result in tensions within the family (Barth, 1986). In the long term, the high levels of stress experienced by the parents of school-refusing young people may add to marital distress and parental anxiety and depression (Heyne & King, 2004; Kearney & Hugelshofer, 2000). The detection and management of school refusal similarly costs school psychologists, counsellors, and administrators much time and resources. Directly, a young person's refusal to go to school can result in disruptions in the class for the teacher and other school staff involved. For example, teachers must invest considerable time in helping a school-refusing young person catch up and then keep up with class work. Indirectly, persistent absenteeism violates the norms which school staff strive to uphold: the importance of being at school for social and academic learning (Barth, 1986).

### Treatment of school refusal

While several studies have also investigated the efficacy of pharmacological interventions for cases of school refusal (e.g., Bernstein et al., 2000; Bernstein, Hektner, Borchardt, & McMillan, 2001), the most commonly evaluated intervention for school refusal is cognitive-behavioural therapy (CBT). Given the overlap in clinical presentation and causal factors between anxiety and school refusal (Egger et al., 2003), cognitive therapeutic techniques and behavioural therapeutic techniques for managing anxiety are incorporated in programs to treat school-refusing young people. A number of studies attest to the efficacy of CBT in reducing internalizing problems and promoting school attendance (Heyne et al., 2002; King et al., 1998; Last et al., 1998). For example, in a study by King et al. (1998), thirty-four school-refusing young people aged 5 to 15 years were randomly assigned to six sessions of individual

CBT plus parent/teacher training (5 sessions with parents/1 meeting with school) or a waiting-list control condition. The individual CBT involved both behavioural therapeutic strategies (e.g., training in relaxation, exposure, and social skills training) and cognitive therapeutic strategies (e.g., modifying maladaptive cognitions). Parent and teacher training included preliminary considerations such as school placement, behaviour management strategies (e.g., planned ignoring and rewards), and the development of an attendance plan. Results indicated that the young people treated with CBT improved to a greater extent in terms of school attendance, self-reported fear, anxiety, depression, and self-efficacy relative to those children and adolescents in the waiting-list condition.

King and colleagues (1998) suggested that the successful results following the brief, intensive treatment may have been due to high caregiver involvement in the intervention. However, they also recommended future studies examine the relative contributions of individual CBT and parent/teacher training. Accordingly, Heyne et al. (2002) evaluated the comparative efficacy of individual CBT, parent and teacher training, and combined individual CBT/parent and teacher training in the treatment of school refusal. Sixty-one young people from 7 to 14 years of age were randomly assigned to the three different treatment conditions. Results indicated that there were significant improvements over time across all three treatment conditions. At post-treatment, both conditions which involved parents and teachers led to fewer internalizing problems as reported by mothers relative to the individual CBT condition (Heyne et al., 2002). No significant differences in outcomes were found between the conditions at four-month follow-up.

The results of the aforementioned studies indicate that there is a substantial base of evidence for the efficacy of CBT for school refusal (King, Heyne, & Ollendick, 2005). However, the intervention does not yet meet criteria for designation as a 'well-established treatment' (King, Tonge, Heyne, & Ollendick, 2000; Silverman, Pina, & Viswesvaran, 2008). In their study of 56 school-refusing children and adolescents, Last and colleagues (1998) reported that an attention-control placebo was equally effective as CBT in improving attendance rates and reducing anxious symptoms. Further, a series of studies into the effectiveness of CBT with anxious-depressed adolescent school refusers found that CBT was not effective unless combined with imipramine (Bernstein et al., 2000, 2001).

Research into the predictors of treatment outcome of CBT for school refusal may allow for improvements in treatment response. Knowledge of the factors leading to treatment response or non-response can allow for tailoring of interventions to specific individuals, which in turn may enhance treatment efficacy (March & Curry, 1998). Although few studies have investigated predictors of outcome of CBT for school refusal, Layne, Bernstein, Egan, and Kushner (2003) reported that the severity of school attendance problems, the diagnostic profile, and the type of treatment administered can all impact upon the efficacy of CBT for school refusal with adolescents.

## School refusal in adolescence: Prevalence, presentation, and treatment

Developmental factors may also influence the treatment outcomes of school-refusing adolescents. Adolescence is a unique developmental phase in terms of the onset and presentation of school refusal (Heyne, 2006). There are major peaks in the incidence of school refusal during adolescence, corresponding with transitions between primary school and junior high school, and between junior high school and high school (McShane et al., 2001; Ollendick & Mayer, 1984). Indeed, school refusal appears to be more common among adolescents relative to children (e.g., Berg, 1992; Kearney et al., 1995; Last, 1992). Studies into school refusal have often included a large percentage of young people aged 12 years or older (e.g., 47.1% in King et al., 1998; 65.6% in Heyne et al., 2002).

In terms of the presentation of school refusal, Baker & Wills (1978) reported that acute school phobia (i.e., the onset of school phobia following three years of trouble-free attendance at school; school phobia being equivalent to school refusal) was most common in adolescents relative to children. Hersov (1985) suggested that older school refusers are more likely to display an insidious onset than younger school refusers. Adolescents with anxiety disorders are often diagnosed with additional anxiety disorders and with mood disorders (Ollendick et al., 2008); therefore, school-refusing adolescents may display greater diagnostic comorbidity than younger school refusers. In older children and adolescents with school refusal, common disorders are social phobia, panic disorder, and depressive disorders. Separation anxiety disorder is more common in younger school refusers relative to school-refusing adolescents (Baker & Wills, 1978; Last & Strauss, 1990). Berg & Collins (1974) also suggested that the emotional upset displayed by school phobic adolescents faced with attending school may often present as anger and defiance, rather than fear and sadness.

Adolescents also appear to be less responsive to currently available versions of CBT for school refusal, relative to younger children. Last and colleagues (1998) found that adolescents were less likely than younger children to achieve 95 percent attendance by post-treatment following individual CBT. Heyne (1999) also found that adolescent school refusers (aged 12-14 years) had attained significantly lower levels of school attendance at follow-up than children (aged 7-11 years). Several factors may account for this poorer treatment response. School refusal during the adolescent years appears to be more severe than in childhood, with greater levels of absenteeism being reported among school-refusing adolescents (Hansen et al., 1998). Indeed, the adolescent school refusers in the study by Heyne et al. (2002) had lower levels of school attendance ( $M$  attendance at pre-treatment = 12%) in comparison to the school-refusing children ( $M$  attendance at pre-treatment = 31%; Heyne, 1999).

Further, the clinical presentation of adolescent school refusal may be more complex, and thus this age group can be harder to treat. Anxious-depressed adolescent school refusers may be especially challenging clients, in that young

people with comorbid anxiety and depression often present with greater symptom severity and respond less to treatment (Berman, Weems, Silverman, & Kurtines, 2000). The diagnoses commonly found in adolescents with school refusal may also be the disorders which are challenging to treat, such as social phobia (Bernstein et al., 2001). For example, school refusers with social phobia may have deficits in social skills or competencies. Continued social skills deficits may decrease the chance of experiencing 'successful' exposures to school-related situations, as other classmates may react negatively to the young person's inappropriate behaviours. The exposures may therefore be less effective in reducing anxiety for these young people (Spence, Donovan, & Brechman-Toussaint, 2000) and the potency of the treatment attenuated.

Developmental factors associated with adolescence can also influence the therapeutic process and in turn, the treatment outcomes of adolescent school refusers (Sauter, Heyne, & Westenberg, 2009). The adolescent phase is defined by transitions in *individual, family, social, and school* factors, and these changes, "... [can alter] one's developmental trajectory ...in positive and negative directions" (Holmbeck et al., 2006, p. 422). Developmental changes can also facilitate or impede and adolescent's responsiveness to treatment and hence influence their treatment outcomes (Weisz & Hawley, 2002).

An *individual* developmental factor which is of particular significance to CBT is the influence of CBT-relevant cognitive capacities on engagement in treatment, and in particular in cognitive therapeutic techniques in CBT. Metacognitive capacities such as self-reflection and insight allow young people to engage in CBT-relevant activities, such as the identification of (the relationships between) thoughts, feelings, and behaviours (Suveg, Comer, Furr, & Kendall, 2006). While many of the cognitive capacities relevant to CBT are acquired during adolescence, not *all* adolescents develop cognitive capacities to the same extent. Some adolescents may therefore be less able to successfully engage in *all* cognitive therapeutic techniques (Oetzel & Scherer, 2003).

Adolescent autonomy development in the *family* context can also impact the process and outcomes of treatment (Stallard, 2002b). The separation-individuation process in the parent-child relationship is seen to be related to separation anxiety-based school refusal in younger children (Elliot, 1999). The same process is also implicated in school refusal in adolescence, but in a more complex form. In the adolescent period, the achievement of a secure and lasting separation from the parents and the development a sense of self is of utmost importance. Adolescents who have difficulties in negotiating these developmental tasks may be susceptible to developing school refusal (Goldberg, 1977; Jackson, 1964; Rubenstein & Hastings, 1980). Indeed, Berg & Collins (1974) linked adolescent wilfulness, stubbornness, and assertiveness in the family situation to the occurrence of school refusal in the adolescent period. Similarly, Jackson (1964) described the school refusal of four

adolescent clients as "...an open attempt to assert themselves as persons in their own right, to stand up to their parents and parent-figures such as teachers..." (p. 72). Due to an interaction between anxiety-motivated avoidance and defiance fuelled by strivings for autonomy, adolescents with school refusal may be more likely, and more (physically) able, to resist parents' and teachers' efforts to return them to regular school attendance (Hansen et al., 1998). Adolescent school refusers may demand to decide themselves 'when and how' they return to school. Planning for school return can thus become a source of conflict and tension between adolescents and parents, and a source of ambivalence towards a clinician who places the issue of school attendance on the therapeutic agenda.

Changes in the *social* context of adolescents may also impact the treatment of school refusal. Improvements in social perspective-taking ability may prompt school-refusing adolescents to increasingly evaluate what others 'think of them' (Albano, 1995). At school, many anxious adolescents feel that their behaviour, appearance, and social skills are under constant scrutiny by their peers (Albano, 1995). At the same time, social acceptance by peers is especially important during adolescence (Geldard & Geldard, 2004). School-refusing young people may have problems 'fitting in' with their classmates, due to their long absences, and deficits in social skills resulting from infrequent interactions with peers (Taylor & Adelman, 1990). Place, Hulsmeier, Davis, and Taylor (2000) stated that many of the adolescent school refusers in their study reported negative social experiences at school such as bullying or teasing, and feelings of loneliness and vulnerability. Taken together, school-refusing adolescents' greater self-awareness and the increased importance of peers may heighten their anxiety related to school attendance. Further, social factors may impact on the process of treatment with school-refusing adolescents. For example, in-session exposure practice may not adequately prepare the adolescent to deal with unanticipated occurrences within in-vivo exposures at school (i.e., peers reacting to the adolescent in an unexpected way). The adolescent may then be less motivated to re-attempt a 'failed' exposure, delaying or disrupting plans for increasing school attendance.

In terms of developmental factors associated with the *school* context, the transition to high school impacts on the process of treatment of school refusal and hence treatment outcomes. Increasing academic and (school-related) social demands can contribute to high levels of stress for school-refusing adolescents (Heyne, 2006). In addition, due to the importance of school results for entrance to tertiary studies, high schools may be less willing to make special accommodations for catching up on missed classes or developing an adjusted class schedule. This may in turn delay or disrupt school attendance plans made in treatment. A receptive atmosphere at school is essential for a successful re-entry to school (Taylor & Adelman, 1990). However, high school staff members who function as a contact person for the school-refusing adolescent may have a high 'caseload' or may share the task with several other staff

members, making them less available as a source of support for the young person. In addition, communication amongst staff members about special entry plans may be poor, increasing the risk that well-prepared attendance plans are thwarted.

## Summary and hypotheses of this dissertation

In order to accurately identify school attendance problems, it is important to distinguish between types of school attendance problems. A common differentiation is that made between truancy, school withdrawal, and school refusal. School-refusing young people are absent from school with parental knowledge but without their approval, and going to school is often accompanied by somatic complaints and anxiety. Due to the serious short-term and long-term consequences of prolonged absence from school for young people, their families and schools, effective strategies to treat school refusal are of key importance. Numerous treatment outcome studies point to the efficacy of CBT for school refusal. However, adolescent school refusers are a unique population due to the influence of developmental tasks and transitions on the prevalence, presentation, and treatment of school refusal. It is therefore important that adolescent developmental factors be considered when designing and delivering CBT. To enhance the efficacy of CBT for school-refusing adolescents, an existing practitioner guide for school-refusing children and adolescents (Heyne & Rollings, 2002) was extended and modified to take into account adolescent developmental factors. The preparation, implementation, and systematic evaluation of the resulting treatment - the '@school project' (Heyne, Sauter, & Van Hout, 2008) - was the objective of the current research and the topic of this dissertation.

No hypotheses were proposed in relation to the first aim of the current research, namely the preparation of an open trial of a developmentally-appropriate CBT for adolescent school refusal. The results of the preparatory process will be presented in this dissertation descriptively in Chapters 2 and 3. The hypotheses associated with the second aim, the implementation and systematic evaluation of the treatment, were: i) the treatment would be associated with an increase in school attendance, a decrease in anxious and depressive symptoms as reported by the adolescent and parents, and an increase in self-efficacy in both the adolescents and parents; and ii) the treatment would be perceived as being acceptable by adolescents, parents, school staff, and clinicians. If indeed improvements in functioning (with respect to school attendance, emotional symptoms, and self-efficacy) are evident at post-treatment and at follow up, and the developmentally-appropriate CBT intervention is found to be acceptable, this will provide preliminary support for the efficacy of this developmentally-appropriate treatment for the management of school refusal in adolescents. The association between developmental factors and the treatment outcomes of adolescent school refusers has not been examined in previous studies. Therefore, the third aim, the examination of the relative importance of developmental factors in the prediction of treatment outcome, was analysed exploratively. The identification of developmental

factors which are associated with positive treatment outcomes can facilitate the testing of these prediction relationships in subsequent randomized controlled trials. This information can further inform the tailoring of treatment for school-refusing adolescents in terms of their developmental needs and capacities.

## Outline of this dissertation

The current dissertation encompasses a series of four studies. Following this General Introduction, Chapters 2 and 3 describe preparatory studies undertaken prior to the implementation of the open trial. In particular, Chapter 2 provides a theoretical rationale for the development of the '@school project' for school-refusing adolescents, by drawing on the developmental psychology, developmental psychopathology, and clinical child and adolescent psychology literature. Information relevant to CBT, anxiety, and adolescent development drawn from a wide range of sources was reviewed and synthesized in order to inform the development of a CBT for school refusal in adolescence. To enhance the generalizability and applicability of the review, and given the overlap in clinical presentation and aetiology between anxiety and school refusal, the scope was broadened to adolescent anxiety disorders. The chapter discusses 'why' it is important to consider developmental factors in designing and delivering CBT for anxious adolescents and 'how' clinicians can developmentally tailor CBT for anxious adolescents. The review identified six key domains of developmentally-appropriate treatment design and delivery which clinicians and researchers can be mindful of when working with anxious adolescents. Subsequently, Chapter 3 illustrates the development of a measure to assess developmental factors which have the potential to enhance the CBT outcomes in young people, namely CBT-relevant cognitive capacities. In this chapter, the translation, modification, and psychometric evaluation of the Self-Reflection and Insight Scale for Youth (SRIS-Y) with a Dutch community sample is described. Two smaller investigations are presented in this chapter: a pilot study, involving the translation and adaptation process and the results of item analyses, and a second study which explored the psychometric properties of the resulting measure.

Chapters 4 and 5 describe the implementation and systematic evaluation of the developmentally-appropriate treatment. In Chapter 4, this is in the form of a qualitative case study which allows for a more detailed description of the features of the treatment with the young person, parents, and school staff. The case study illustrates the application of the '@school project' with a 16-year-old female, her mother, and her homeroom teacher. Developmentally-appropriate treatment elements relevant to working with this challenging group of young people are highlighted. In Chapter 5, the treatment is evaluated in the form of an open trial whereby the statistical and clinical significance of the outcomes are tested. This chapter reports on both the efficacy and acceptability of the '@school project' for anxious school-refusing adolescents. The treatment outcomes of the participants at post-treatment and follow-up are

described. In addition, the associations between several developmental factors (e.g., cognitive capacities, autonomy, clinician developmental sensitivity), and treatment outcome are analysed exploratively. The dissertation concludes with a general discussion (Chapter 6) in which the main findings of the studies in this dissertation are re-stated and interpreted, the strengths and limitations of the studies explored, and suggestions for clinical practice and further research discussed.





## Abstract

Anxiety disorders in adolescence are common and disruptive, pointing to a need for effective treatments for this age group. Cognitive-behavioural therapy (CBT) is one of the most popular interventions for adolescent anxiety, and there is empirical support for its application. However, a significant proportion of adolescent clients continue to report anxiety symptoms post-treatment. This paper underscores the need to attend to the unique developmental characteristics of the adolescent period when designing and delivering treatment, in an effort to enhance treatment effectiveness. Informed by the literature from developmental psychology, developmental psychopathology, and clinical child and adolescent psychology, we review the 'why' and the 'how' of developmentally-appropriate CBT for anxious adolescents. 'Why' it is important to consider developmental factors in designing and delivering CBT for anxious adolescents is addressed by examining the age-related findings of treatment outcome studies and exploring the influence of developmental factors, including cognitive capacities, on engagement in CBT. 'How' clinicians can developmentally tailor CBT for anxious adolescents in six key domains of treatment design and delivery is illustrated with suggestions drawn from both clinically- and research-oriented literature. Finally, recommendations are made for research into developmentally-appropriate CBT for anxious adolescents.

## Introduction

Anxiety is one of the most common disorders among young people (Roberts, Roberts, & Chan, 2009), and higher rates of anxiety disorders have been reported in adolescence relative to childhood. For example, Newman and colleagues (1996) found an age-related increase in the prevalence of anxiety disorders in a birth cohort, increasing from 7.5 percent at 11 years of age to 20.3 percent at 21 years of age. Similarly, Essau, Conradt, and Petermann (2000) reported that rates of anxiety disorders increased with age, from 14.7 percent at 12 to 13 years, to 22.0 percent at 16 to 17 years of age. Although separation anxiety disorder is less prevalent in adolescence relative to childhood (Cohen et al., 1993), other anxiety disorders such as generalized anxiety disorder (Rapee, 1991) and social anxiety disorder (Westenberg, Gullone, Bokhorst, Heyne, & King, 2007) are more prevalent in adolescence.

The presentation of anxiety in adolescence can be complex, chronic, and severe. Adolescents may be diagnosed with several concurrent anxiety disorders, as well as depression, conduct disorder and alcohol abuse (Clark, Smith, Neighbors, Skerlec, & Randall, 1994; Ollendick, Jarrett, Grills-Taquechel, Hovey, & Wolff, 2008). Essau (2008) reported that the most common pattern of comorbidity in both community ( $n = 185$ ) and clinical ( $n = 69$ ) samples of adolescents aged 12 to 17 years was that of depression and anxiety, with comorbidity rates of 31.4 percent and 47.0 percent in the community and clinical samples respectively. There is considerable evidence for the continuity of anxiety disorders into late adolescence and even adulthood (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003; Kim-Cohen et al., 2003; Kovacs & Devlin, 1998). The maladaptive coping mechanisms of anxious young people may become more entrenched over time (Hudson, Kendall, Coles, Robin, & Webb, 2002), which may intensify anxious symptoms with age. If left untreated, young people with problematic levels of anxiety often endure short- and long-term difficulties in their personal, family, school and social functioning (Essau et al., 2000; Keller et al., 1992).

The adolescent period is a developmental phase defined by transition. Many intrapersonal (e.g., cognitive development), interpersonal (e.g., seeking autonomy from parents), and contextual changes occur simultaneously in family, school and other contexts; and biological, social-emotional, psychosocial, and cognitive development takes place (Holmbeck, O'Mahar, Abad, Colder, & Updegrove, 2006; Roeser, Eccles, & Sameroff, 1998). Developmental factors such as these are regarded as being important to the development, maintenance and presentation of anxiety disorders in adolescence (Clark et al., 1994; Gosch, Flannery-Schroeder, Mauro, & Compton, 2006). For example, the peak in incidence of social anxiety in adolescence coincides with normal increases in fears of negative evaluation and social embarrassment (Ollendick & Hirshfeld-Becker, 2002). At the same time, growing independence may facilitate avoidance behaviours (Rao et al., 2007). These developmental transitions may also impact on a client's willingness and ability to engage in CBT. Interventions for anxious adolescents can therefore be enhanced by taking into account the unique



developmental characteristics of the adolescent period.

Several reviews and reports of treatment outcome research allude to the importance of considering development in intervention with young people in general (e.g., Chronis, Jones, & Raggi, 2006; Kearney & Albano, 2000; Kendall et al., 2005; Kendall & Williams, 1986; Kinney, 1991; Weisz & Hawley, 2002) and with anxious young people in particular (Gosch et al., 2006; Kingery et al., 2006; Silverman, Pina, & Viswesvaran, 2008). Indeed, examples of 'developmentally-appropriate' treatments for anxious adolescents are beginning to emerge. These are interventions which seek to take into account the young person's biological, social-emotional, psychosocial, and cognitive development (e.g., Kendall, Choudhury, Hudson, & Webb, 2002; Siqueland, Rynn, & Diamond, 2005). To date, however, there has been no comprehensive review of the impact that developmental issues may have upon the way in which CBT for adolescent anxiety is designed and delivered.

The purpose of the present review is to advance the use of developmentally-appropriate CBT for anxious adolescents. We begin by presenting three main arguments for 'why' it is important to do so. Subsequently, drawing on clinical and research literature from developmental psychology, developmental psychopathology and clinical child and adolescent psychology, we review and expand upon suggestions for 'how' CBT can be developmentally tailored for anxious adolescents. The review describes developmentally-appropriate practice in relation to treatment with young people, developmentally-appropriate practice in relation to CBT with young people, and, where possible, developmentally-appropriate practice in relation to CBT with anxious adolescents. In the absence of suggestions from the literature, adaptations relevant to CBT for adolescents with anxiety disorders will be proposed. To conclude, we provide suggestions for future research into developmentally-appropriate CBT for anxious adolescents.

## **'Why' consider developmental factors when designing and delivering CBT for anxious adolescents?**

### **Age and developmental level may moderate treatment outcome**

Cognitive-behavioural therapy (CBT)<sup>4</sup> is a widely implemented and evaluated intervention used to treat anxiety disorders. It is an amalgam of behaviourally- and cognitively-based strategies derived from behavioural and cognitive theories (Sanders & Wills, 2005). In CBT, behaviourally-based strategies involve the conceptualization of anxious symptoms in terms of conditioned responses to stimuli, with corresponding interventions emphasizing the blocking and extinction of avoidance behaviour through exposure. Cognitive therapeutic techniques include self-monitoring of thoughts,

<sup>4</sup> Hereafter, the term 'CBT' will be used to refer to those interventions which comprise both cognitive and behavioural strategies for change, while the term 'cognitive therapeutic techniques' will be used when making specific reference to interventions aimed at cognitive change.

feelings, and behaviour and cognitive restructuring, aimed at modifying anxiety-related thought content and processes to produce changes in anxiety symptoms (Kendall, 2000).

Several meta-analyses support the effectiveness of cognitive and behavioural treatments for adult anxiety disorders (Deacon & Abramowitz, 2004; Norton & Price, 2007) and several recent reviews conclude that there is increasing evidence for the short- and long-term efficacy of CBT for anxiety-related difficulties in childhood and adolescence (Cartwright-Hatton, Roberts, Chitabesan, Fothergill, & Harrington, 2004; James, Soler, & Weatherall, 2005; Ollendick & King, 1998; Silverman et al., 2008). On average, 60 to 80 percent of children and adolescents treated with CBT no longer meet the Diagnostic and Statistical Manual of Mental Disorders (DSM) criteria for their primary anxiety disorder at post-treatment (Ginsburg & Kingery, 2007). As noted by Ginsburg and Kingery (2007), while CBT provides relief of symptoms for many young people, it is clearly not a panacea. A significant proportion of young people treated with cognitive behavioural protocols continue to report clinical and statistical levels of anxiety symptoms post-treatment. In their review of 10 clinical trials examining the efficacy of CBT for anxiety in young people, Cartwright-Hatton and colleagues (2004) revealed that anxiety diagnoses were still present after treatment in more than a third of participants. In fact, many studies report outcomes in terms of 'treatment completers', which may artificially elevate reported rates of symptom alleviation (Albano & Kendall, 2002). As Cartwright-Hatton et al. (2004) aptly concluded, "There is clearly room for considerable improvement in the understanding and treatment of anxiety in this age group" (p. 430).

Age is one variable which has been suggested to be associated with CBT outcomes. However, whether older or younger age is likely to be associated with enhanced outcomes is unclear (Hudson et al., 2002). Studies and meta-analyses investigating psychotherapy for internalizing disorders in young people (e.g., Durlak, Fuhrman, & Lampman, 1991), and CBT for anxious youth specifically (e.g., Cobham, Dadds, & Spence, 1998), have indicated that poorer response to intervention was associated with younger age. Other studies investigating the outcomes of anxiety treatment in young people have found that adolescents fare less well than children. In a study examining predictors of CBT outcome for clinically anxious young people, Southam-Gerow, Kendall, and Weersing (2001) found that older age was associated with poorer outcome post treatment, contrary to a priori expectations. In another study comparing individual and family-based CBT for anxious youth, younger participants (7-12 years) attained significantly better outcomes than their older counterparts across both conditions (13-18 years; Bodden et al., 2008). Yet again other studies report no age effects (e.g., Kendall, Hudson, Gosch, Flannery-Schroeder, & Suveg, 2008).

The lack of clear and consistent age-related patterns in treatment response may be due to a range of factors. Firstly, the type of treatment may influence the

outcomes, inasmuch as younger children seem to benefit from CBT with parent or family involvement (e.g., Barrett, Dadds, & Rapee, 1998) while individual treatment seems to be more helpful for adolescents (e.g., Cobham et al., 1998). Secondly, when 'age' is investigated in treatment outcome studies, researchers use small samples with broad age ranges, which limits the extent to which more sophisticated age-related moderation analyses can be conducted (Silverman et al., 2008). Researchers may combine young people of different ages into single categories (e.g., '8-13 year olds' versus '14 years and older') or compare age categories derived from the sample mean or median, rather than applying theoretically-driven age-related distinctions (Kendall & Williams, 1986; Stallard, 2002a). Thirdly, Creswell and Cartwright-Hatton (2007) noted that most treatment outcome studies on CBT for anxious youth are underpowered, reducing the reliability and validity of statistical analyses used to examine age effects on treatment outcome. Fourthly, relationships currently found between age and treatment response may in fact reflect factors which are merely associated with age, such as the severity and duration of psychopathology, rather than developmental processes (Daleiden, Vasey, & Brown, 1999; Shirk, 1999). Large individual differences in developmental pathways and developmental capacities are characteristic of adolescence (Oetzel & Scherer, 2003). Within the entire adolescent period, as well as amongst adolescents of the same chronological age, the number, nature, commencement, and length of the transitions experienced by young people vary (Holmbeck et al., 2006). As such, chronological age is regarded as a proxy for these developmental processes and an imperfect index of developmental level (Shirk, 1999).

An even more important factor impeding our understanding of the efficacy of CBT for anxious adolescents is their under-representation in treatment outcome studies (Cunningham, Rapee, & Lyneham, 2007; James et al., 2005; Weisz & Hawley, 2002). There are more published treatment outcome studies with children than with adolescents (Roberts, Lazicki-Puddy, Puddy, & Johnson, 2003; Shirk, 1999) and most anxiety treatment outcome studies focus on youth between seven and fourteen years of age (Barrett, 2000). A recent review of 21 studies evaluating the efficacy of CBT for anxious youth found that the average age of the participants was 9.85 years (Compton et al., 2004), calling into question the applicability of the review findings for adolescents with anxiety. While the prevalence of mental health problems, and specifically anxiety disorders, is very high amongst adolescents, many adolescents refrain from seeking professional help (Raviv, Raviv, Vago-Gefen, & Schachter Fink, 2009; Zachrisson, Rödje, & Mykletun, 2006). Accordingly, recruiting adolescents for clinical trials can be very challenging (May et al., 2007). Anxious adolescents in particular may 'slip through the cracks', as they often do not present an immediate problem to school staff, parents or others, unlike adolescents displaying externalizing problems. The lack of treatment outcome studies specifically focusing on anxious adolescents is one of the most significant obstacles to drawing conclusions about factors moderating

the efficacy of CBT for this particular age group. However, there are some indications that adolescents may do less well, and these findings may reflect the influence of developmental factors on the engagement in CBT (Hudson et al., 2002).

### **Developmental factors may influence engagement in CBT**

The developmental processes inherent to adolescence make the teenage years a 'window of opportunity' to alter negative developmental trajectories (Cicchetti & Rogosch, 2002), but these same processes can impact upon the way in which young people engage with the treatment process. In turn, the extent to which a young person is engaged in the therapeutic process may influence treatment success (Chu & Kendall, 2004). For example, the developing need for autonomy can make it difficult for some young people to acknowledge the need for treatment and to accept 'help' (Edgette, 1999, 2002). During treatment, strivings for autonomy can lead to resistance, detachment or disengagement (Rubenstein, 2003; Stallard, 2002b), impairing both the therapeutic alliance and the adoption and generalization of skills outside of treatment. The behaviour of adolescents with anxiety disorders may be particularly challenging for those associated with the treatment process – clinicians, parents, and school staff – due to a complex interaction between anxiety-motivated avoidance on the one hand, and defiance fuelled by strivings for autonomy on the other hand (Garland, 2001). It is conceivable that high levels of anxiety in combination with these strivings for autonomy may lead some adolescents to resist accepting support when having to confront feared stimuli and may even contribute to ambivalence toward engaging in treatment and an evasion of exposure tasks.

The phase of identity development of the client may also influence their engagement in treatment. Marcia (1994) suggested, for example, that young people who are in the foreclosure phase (i.e., who are highly occupied with adopting the values of figures they identify with) may benefit from a slower tempo in treatment sessions. This is held to be important because the exploration of personal issues may reactivate anxieties regarding the process of identity formation. With particular reference to young people's engagement in CBT, Kendall and Williams (1986) suggested that strategies such as self-monitoring may help to further a young person's knowledge of themselves in the service of their identity development.

The way in a client interprets, organizes, and acts on their experiences of the self, others and the environment, or ego development, also may have implications for the engagement of adolescents in particular therapeutic techniques (Kroger, 2004; Westenberg, Hauser, & Cohn, 2004). Swensen (1980) suggested that behaviourally-based treatment (e.g., contingency management) is most suitable for young people below the conformist ego stage, given their tendency to view behaviour in terms of external causes. Adolescents who have achieved the self-aware stage, given their awareness of multiple perspectives, may benefit from cognitive therapeutic techniques such as the questioning of irrational beliefs (Swensen, 1980).

Social-emotional development may also impact upon an adolescent's engagement in CBT. Rohde, Seeley, Kaufman, Clarke, and Stice (2006) found that depressed adolescents (aged 13-17 years) treated with CBT who had good coping skills had a faster recovery time than those who had less adequate coping skills. The authors suggested that treatment outcome may be associated with the augmentation or activation of good baseline coping skills. Given the overlap between CBTs for anxiety and depression (Weersing, Gonzales, Camp, & Lucas, 2008), it is reasonable to expect that anxious adolescents who have more advanced coping repertoires would also have greater benefit from engagement in CBT. Additionally, the level of a young person's emotional development, in particular emotion recognition and regulation skills, can have a considerable impact on CBT participation. Recognizing and differentiating emotions is essential for understanding and applying the cognitive model, and better developed emotion regulation may allow young people to more quickly adopt adaptive coping strategies learned in CBT (Bailey, 2001; Kingery et al., 2006; Suveg, Sood, Comer, & Kendall, 2009).

Holmbeck et al. (2006) and Kendall & Williams (1986) remind us to be mindful of the asynchronicity between physical development and other areas of adolescent development, and the need to tailor treatment content and delivery to the adolescent's abilities, and not their appearance. Physically mature adolescents, for example, may not necessarily have acquired the cognitive, verbal or emotional capacities of same-age peers. In addition, clinical experience suggests that the physical development of the adolescent may have practical consequences for engagement in treatment: if they are reluctant to come to treatment sessions, parents often report that they cannot "pick them up and carry them to the car" as they might do with younger children.

In short, developmental factors can influence the young person's engagement in the therapeutic process in general as well as their engagement in specific therapeutic tasks (e.g., self-monitoring). Given the important role of cognitive therapeutic techniques in CBT, the development of CBT-relevant cognitive capacities may have particularly large implications for the engagement of adolescents in treatment, and thus the augmentation of treatment outcome (Friedberg & Gorman, 2007; Oetzel & Scherer, 2003).

### **Engagement in cognitive therapy calls for consideration of CBT-relevant cognitive capacities**

A major emphasis in the clinical and research literature on CBT with young people is the need to consider the development of cognitive capacities of the young person when designing and delivering treatment (Friedberg & Gorman, 2007; Holmbeck et al., 2006; Stallard, 2002a; Suveg, Comer, Furr, & Kendall, 2006). Typically, research into cognitive development has focused upon a selection of cognitive constructs (e.g., information processing skills), to the relative exclusion of other cognitive constructs (e.g., anxious self-talk) (Weisz & Hawley, 2002). For the purposes of this review,

CBT-relevant cognitive capacities are taken to include intellectual and executive functioning, as well as broader psychological constructs such as theory of mind and self-reflection (Grave & Blissett, 2004).

There are many cognitive capacities implicated in the CBT approach to treatment. Metacognitive and social-perspective taking skills are most frequently mentioned (e.g., Grave & Blissett, 2004; Holmbeck et al. 2006; Oetzel & Scherer, 2003; Quakley, Reynolds, & Coker, 2004; Weisz & Hawley, 2002; Weisz & Weersing, 1999). Metacognitive skills such as psychological mindedness and self-reflection may allow young people to identify and discriminate their own thoughts, feelings and behaviours, and to objectively identify causal relations between them (McAdam, 1986; Suveg, Comer, et al., 2006). Indeed, as noted by Grave and Blissett (2004), impairments in metacognitive skills may limit a young person's ability to understand and participate in CBT. Social perspective-taking is also positioned as a useful skill for engagement in CBT, given that young people participating in CBT are often asked to consider and anticipate the effects of their behaviour on others (Kinney, 1991). Other cognitive capacities mentioned in relation to delivering CBT with young people include abstract, consequential and future thinking (e.g., Holmbeck et al. 2006), hypothetical and deductive thinking (e.g., Harrington, Wood, & Verduyn, 1998; Shirk, 2001), and logical and causal reasoning (e.g., Oetzel & Scherer, 2003; Reynolds, Girling, Coker, & Eastwood, 2006).

Awareness of a young person's metacognitive and social perspective-taking skills, together with the other nominated capacities, may help guide clinicians in their decision-making about the use of cognitive therapeutic techniques held to require these capacities. Unfortunately, there is very little in the way of scientific evidence to guide our thinking about which cognitive capacities warrant attention when designing and delivering CBT with young people, let alone with anxious adolescents. One potential lead is found in the work of Safran, Segal, Vallis, Shaw, & Samstag (1993) with adults participating in cognitive therapy. The study found a relationship between a number of CBT-related cognitive capacities (e.g., the ability to access automatic thoughts) and a range of outcome measures. These results provide some preliminary evidence to support the notion that certain cognitive capacities are important for successful engagement in cognitive therapeutic techniques.

The cognitive development which takes place during the adolescent period may result in an increased 'receptiveness' for cognitive therapeutic techniques in CBT (Oetzel & Scherer, 2003; Ollendick, Grills, & King, 2001; Shirk, 1988). Continuing neural and brain development during adolescence means that adolescents acquire and refine the cognitive capacities commonly regarded as essential to engagement in CBT, such as abstract reasoning and metacognitive skills (Blakemore & Choudhury, 2006; Steinberg, 2005). Piagetian theory (Piaget, 2001) states that it is only when children reach the concrete operational period (7 to 12 years of age) that they are able to begin to reason abstractly, and only during the formal operational period (from 11

or 12 years of age, through to adulthood) do metacognitive skills mature, allowing the young person to reason hypo-deductively and think symbolically. In addition to an increase in abstract thinking capacities, adolescents develop an introspective thinking style which allows them to contemplate their thoughts, feelings and behaviours (Blakemore & Choudhury 2006; Kingery et al., 2006; Schrodtt & Fitzgerald, 1987). Indeed, results of a recent empirical study with a population of socially phobic children and adolescents indicated that it was only adolescents who reported the presence of negative 'self-thoughts', while younger children more commonly confused emotions with anxious cognition (self-talk) (Alfano, Beidel, & Turner, 2006). From information processing research we know that adolescents develop greater processing capacity (e.g., memory), enhanced organizational strategies, and greater awareness and regulation of their own mental states (Keating, 1990; Steinberg, 2005).

Despite the identification of these developmental patterns, there remains little consensus in the clinical and research literature regarding the age at which young people acquire the 'minimum' level of cognitive skills needed to participate in CBT. Some researchers claim that even very young children are able to engage in 'basic' CBT techniques (e.g., Grave & Blissett, 2004; Quakley et al., 2004; Reynolds et al., 2006; Stallard, 2009). Others have argued that CBT may be more appropriate for young people aged 11 years and older (e.g., Durlak et al., 1991). Indeed, adolescents who have a greater capacity to consider multidimensional constructs, to think in a more organized manner, and to consider the perspectives of others may be better able to understand the purpose of treatment and to effectively engage in treatment, relative to children, because children are less cognitively advanced (Oetzel & Scherer, 2003; Weisz & Hawley, 2002).

However, even though adolescence is the period in which many of the cognitive capacities relevant to CBT are acquired, it is unhelpful to conclude that *all* adolescents are able to successfully engage in *all* cognitive therapeutic techniques. The pace of cognitive development varies considerably from one individual to the next (Everall, Bostik, & Paulson, 2005; Schrodtt & Fitzgerald, 1987). Further, the threshold of these changes is not absolute; some adolescents will never acquire the highest levels of reflective thought and formal operational thinking (Werner-Wilson, 2001). Even if a young person has developed these skills, they may still be relatively 'inexperienced' in applying them (Werner-Wilson, 2001). The use of such skills may be context-dependent. For example, when adolescents are in challenging or emotionally-demanding situations, they may use less sophisticated cognitive coping strategies for handling the situations (Kingery et al., 2006; Oetzel & Scherer, 2003). In addition, concurrent psychopathology (e.g., substance abuse) may delay or disrupt certain developmental processes, such that the cognitive capacities of anxious adolescents may differ considerably from those of non-anxious same-aged peers (Oetzel & Scherer, 2003).

## 'How' can clinicians developmentally tailor CBT for anxious adolescents?

According to Wagner (2003), developmentally-appropriate treatments for adolescents are those which "...take into account the unique developmental issues and problems characteristic of adolescence (e.g., ascendancy of the peer group, identity formation issues, propensity towards limit testing)" (Wagner, 2003, p. 1349). In relation to CBT specifically, Grave and Blissett (2004) noted that a developmental perspective needs to be incorporated into cognitive behavioural models and treatment design, as well as the delivery of CBT. In sum, a developmentally-appropriate CBT for adolescents will account for the young person's developmental context, their needs, and their capacities.

In discussions in the literature about treatment with adolescents, numerous suggestions have been made about how to take developmental factors into account when working with this group (e.g., Bedrosian, 1981; Kendall & Williams, 1986; Miller, 1993; Wilkes, Belsher, Rush, & Frank, 1994). These suggestions are diverse and sometimes divergent, referring to just one or two developmental factors, as opposed to a broad spectrum of factors, or referring to specific protocols rather than making recommendations relevant to the design and delivery of CBT more generally. Few of the suggestions are specific to the treatment of anxiety in adolescents, and fewer still are empirically-based. The lack of (empirically-based) knowledge about how to account for developmental factors in the treatment of adolescent anxiety may be attributable in part to the 'developmental level uniformity myth' (Kendall, 1984), which assumes that young people are a homogenous group. As a result, differences in the biological, social-emotional, psychosocial, and cognitive development of young people are overlooked. According to Holmbeck et al. (2006), a 'one size fits all' approach is often used in the design and delivery of treatment. Given the heterogeneity which characterizes the adolescent period, the assumption that 'one size fits all' may have particularly negative consequences for treatment outcomes.

Fortunately, researchers and clinicians have begun to pay greater attention to developmental factors when designing, delivering, and evaluating CBT for adolescents. In the most recent of Holmbeck and colleagues' (2006) reviews of the application of CBT with adolescents, it was reported that 70 percent of the 29 empirical articles appearing between 1999 and 2004 mentioned developmental issues in treatment design and evaluation, an increase from 26 percent between 1990 and 1998. For the current review, a search of (English-language) empirical articles and treatment manuals was done for the period from 1990 to the present, using various combinations of the terms 'adolescence', 'cognitive behavioural therapy' and 'anxiety'. The results of this search are presented in Table 1, which provides a descriptive overview of a number of CBTs for anxiety in adolescence which explicitly emphasized developmental factors in treatment design and/or delivery.

This section on 'how' to conduct developmentally-appropriate CBT with anxious adolescents is based on a review of the materials presented in Table 1, together with a review of other materials (e.g., book chapters) containing descriptions of developmentally-appropriate practice in relation to treatment with young people, developmentally-appropriate practice in relation to CBT with young people, and, where possible, developmentally-appropriate practice in relation to CBT with anxious adolescents. Six key domains of developmentally-appropriate treatment design and delivery were consequently identified, and are discussed below.

**Table 1.**  
*Examples of Developmentally-Informed Adaptations to CBT for Anxious Adolescents*

Author	Year	Type of publication	Age	Treatment	Intervention	Developmentally-informed adaptations
Angelosante, A.G., Pincus, D.B., Whitton, S.W., Cheron, D., & Pian, J.	2009	Treatment description and case study (n = 2)	12-17 years	Adolescent Panic Control Treatment With In-Vivo Exposures with (APE+fam) or without family involvement (APE)	Panic disorder and agoraphobia	Briefer and more intensive treatment to allow young people to more quickly return to developmentally important activities Included clinician-assisted in-vivo exposures, to guide the adolescents in their execution rather than letting them do them unsupervised. Parents/caregivers (in APE+fam) engaged as coaches Assessment of motivation pre-treatment and motivational enhancement techniques used in session Manual adapted to include developmentally-appropriate and concrete examples, less technical language, and sentence structure was simplified Gradual transfer of responsibility and ownership of the treatment from clinician to the adolescent.
Cunningham, M.J., Wuthrich, V.H., Rapee, R.M., Lyneham, H.J., Schniering, C.A., & Hudson, J.L.	2009	Empirical study (n = 5)	14-16 years	Cool Teens CD-ROM for Anxiety Disorders in Adolescents (CBT)	Anxiety	Interactive multimedia presentation (text, audio, illustrations, cartoons and live video) with examples and presentation relevant to adolescent clients Treatment delivered in a new media (computer-based treatment) suited to adolescents (allows for personal control and flexibility; reduces stigma of receiving treatment) Involvement of young people during content creation
Spence, S. H., Donovan, C.L., March, S., Gamble, A., Anderson, R., Prosser, S., et al.	2008	Treatment description and case study (n = 2)	13-17 years	Online CBT for child and adolescent anxiety [BRAVE-ONLINE] – Teenage version	Anxiety	Interactive multimedia presentation (online, via internet) Visually appealing and interesting (bright, eye-catching graphics including real-life pictures) More complex text, examples and stories, more advanced graphics, and interspersed with a greater number of interactive exercises (e.g., "quizzes") than child version Aimed at a minimum reading level of age 12 Use of teenage characters as "models" for the use of coping strategies to overcome anxiety problems
Siqueland, L., Rynn, M., & Diamond, G. S.	2005	Empirical study (Phase i, n = 8, Phase ii, n = 11)	12-18 years	Cognitive Behavioral and Attachment-Based Family Therapy	Anxiety	CBT components taught more quickly Cognitive therapeutic strategies emphasized Level of parent involvement in exposures negotiated as part of overall treatment focus of negotiating a balance of competency, autonomy, and attachment to parents
Nauta, M.H., Scholing, A., Emmelkamp, P.M.G., & Minderaa, R.B.	2003	Empirical study (n = 79)	7-18 years	Dutch adaptation of Coping Cat program (Kendall, 2000)	Anxiety	Extra workbook pages added for adolescents (e.g., less childish; more in-depth explanation and application of cognitive techniques such as challenging thoughts).



**Table 1. (continued)**  
*Examples of Developmentally-Informed Adaptations to CBT for Anxious Adolescents*

Author	Year	Type of publication	Age	Treatment	Intervention	Developmentally-informed adaptations
Ginsburg, G.S., & Drake, K.L.	2002	Empirical study (n = 6)	14-17 years	School-based group CBT for African-American adolescents	Anxiety	Manual adapted to be developmentally-appropriate and culturally sensitive Adolescent-relevant examples included Parents not included due to time constraints and scheduling conflicts Adolescent can choose their own name for the program (i.e., their own interpretation of the initials C.A.T.) More detailed psychoeducational material Reduced emphasis on affective education Cognitive therapeutic strategies emphasized Increased adolescent autonomy in the context of parental overprotection and control
Kendall, P.C., Choudhury, M., Hudson, J.L., & Webb, A.	2002	Treatment manual	14-17 years	The C.A.T. Project (CBT)	Anxiety	Group format Cohesion-building introductory group activities
Scapillato, D. & Manassis, K.	2002	Treatment description	12-15 years	Group CBT	Anxiety	Group format Features age-appropriate content, activities, and illustrations More room for group discussion rather than didactic interaction in treatment session
Barrett, P.M., Lowry-Webster, H.M., & Turner, C.	2000	Treatment manual	12-16 years	Friends for Youth (CBT)	Anxiety	Less attention to affective education Emphasis on self esteem building and friendship skills More attention to challenging negative thinking
Hoffman, E.C. & Mattis, S.G.	2000	Case study (n = 2)	13 years	Panic Control Treatment (CBT-based)	Panic disorder	Clear, simplified language and verbal and visual examples used Lively examples of concepts incorporated New terms/analogies to help adolescents understand/recall concepts Parents involved in some sessions as 'coaches' Focus on active, experiential aspects of treatment over technical psychoeducational information
Albano, A.M.	1995	Treatment description	13-17 years	Cognitive-Behavioral Group Treatment for Adolescents	Social phobia	Group format Protocol was a downward extension of the adult version of the treatment Fears and anxieties are evaluated within a developmental context Case formulation presented to increase motivation/normalize problems Parent involvement 4 sessions; psychoeducation, how to support child Inclusion of behavioural social skills training More modelling, role playing, and behaviour shaping in the first four sessions, with a shift toward active participation later Use of workbooks and handouts Focus on typical feared situations for adolescents (snack time practice)
Albano, A.M., Marten, P.A., Holt, C.S., Heimberg, R.G., & Barlow, D.H.	1995	Empirical study (n = 5)	13-17 years	CBT	Panic disorder with agoraphobia	Parent involvement in exposure practice

### Conducting assessment of CBT-relevant (cognitive) capacities

In the literature on clinical child and adolescent psychology, the inclusion of developmentally-appropriate measures to assess pre- and post-treatment functioning is often stressed (e.g., Eyberg, Schumann, & Rey, 1998). In addition to developmentally-appropriate outcome measures, Hudson and colleagues (2002) and Shirk (1999) recommended that clinicians and researchers should attempt to assess a range of developmental factors prior to starting CBT with an anxious adolescent client. While age is a frequently used developmental marker for both clinicians and researchers, specific indicators of development may be more informative and meaningful, given young people of the same age may vary greatly in developmental status. Including such measures could allow for an exploration of the way in which developmental factors influence engagement in treatment, and in turn treatment outcomes (D'Amico et al., 2005; Wagner, 2003). There are many readily available pen-and-paper measures for a wide variety of developmental factors (e.g., the Pubertal Developmental Scale; Petersen, Crockett, Richards, & Boxer, 1988; the Adolescent Autonomy Questionnaire; Noom, Dekovic, & Mees, 2001).

The assessment of CBT-relevant cognitive capacities may also be particularly useful prior to starting CBT. Clinicians will often 'estimate' a client's CBT-relevant cognitive capacities on the basis of a client's chronological age, their physical appearance, or their IQ, and then use this estimate to adjust the delivery of cognitive therapeutic techniques to the perceived capacities of the client. However, the young person's level of physical or intellectual development may not necessarily predict development in CBT-relevant cognitive capacities (Kendall & Williams, 1986; Kinney, 1991). Hence, such estimations can lead to inaccurate predictions about the extent of a young person's ability to engage in cognitive therapeutic techniques (Weisz & Hawley, 2002; Weisz & Weiss, 1989; Wilkes & Belsher, 1994). As noted by Holmbeck and colleagues (2006), however, there is currently "...no straightforward user-friendly method of assessing level of cognitive development across different cognitive sub-domains" (p. 448). These authors proffered a number of suggestions for the assessment of cognitive capacities in adolescents. The clinician might make use of measures such as the similarities subtest of the WISC-III (Wechsler, 1991) in order to tap into abstract reasoning. The Selman's Interpersonal Understanding Interview (Selman & Lavin, 1979) might be used to measure social perspective-taking. A more recent development is the Self-Reflection and Insight Scale for Youth (Sauter, Heyne, Blöte, Van Widenfelt, & Westenberg, in press). This psychometrically sound and developmentally-appropriate self-report measure provides another means of exploring a young person's proficiency in cognitive capacities deemed relevant to CBT; namely self-reflection and insight.

A possible limitation inherent to such measures is that they tap into cognitive capacities which may only be distally related to the engagement of the young person in CBT, rather than assessing skills directly applicable to CBT (G.N. Holmbeck,



personal communication, April 26, 2006). Holmbeck and colleagues (2006) suggested that the clinician also conduct informal assessment of cognitive capacities during their sessions with the young person. Several examples of the 'informal' assessment of cognitive capacities are found in the literature. To ascertain a young client's ability to access automatic thoughts, the clinician can ask the client in the assessment phase or early in treatment to recall and describe a recent, difficult situation they have experienced, and "what went through your mind when...?". If this proves too difficult for the young person, the clinician can ask about what thoughts and feelings the client is currently having, or ask the client "what would someone else think in the situation?" (Stallard, 2002b). Visual aids such as thought bubbles or cognitive cartoons can also be applied to informally assess cognitive capacities relevant to CBT (Kendall, 2000; McAdam, 1986; Stallard, 2009). A number of interactive tasks designed to tap into the cognitive capacities relevant to CBT have been evaluated with young children, and these may also be suitable for use with less mature and/or less verbal adolescents (Doherr, Reynolds, Wetherly, & Evans, 2005; Quakley et al., 2004; Reynolds et al., 2006). Anxious adolescents may have particular difficulties in describing their feelings and thoughts, due to both fears of negative evaluation and performance-related anxiety (Hudson et al., 2002). Therefore, the use of more formal means of assessing cognitive capacities (i.e., structured tasks or questionnaires) could be used if the clinician thinks the client's anxiety levels may interfere with what is yielded during informal assessment.

### **Planning treatment**

In the following sections, the impact that developmental factors have upon three facets of planning a CBT program is reviewed: the development of the cognitive behavioural case formulation; decision-making around the selection, timing, and dosage of treatment components or 'modules'; and decision-making associated with the application of behavioural vis-à-vis cognitive techniques.

### ***Preparing a cognitive behavioural case formulation***

The cognitive behavioural case formulation summarizes accumulating information about the onset and maintenance of the young person's presenting problems, based on a cognitive behavioural model of psychopathology. This information is then used to inform decision-making about treatment. A developmentally-appropriate cognitive behavioural case formulation is one which elucidates the role of developmental factors and processes (e.g., school transition; escalating conflicts with parents associated with autonomy development) which are associated with the development and maintenance of the psychopathology (Drinkwater, 2005; Dummett, 2006). When working with anxious children and adolescents, cognitive behavioural case formulations are developed in accordance with cognitive behavioural models of anxiety. These models are mostly drawn from research with anxious adults (Alfano,

Beidel, & Turner, 2002; Cartwright-Hatton, 2006; O'Connor & Creswell, 2005). One of the well-known models is the Clark and Wells (1995) model of social anxiety. Recently, Hodson, McManus, Clark, and Doll (2008) tested the applicability of this model with a group of socially anxious adolescents aged 11 to 14 years. It was found that the key cognitive elements of the model predicted levels of social anxiety. In particular, the study revealed that negative interpretations of social stimuli, increased self-focused attention, and negatively biased pre- and post-event processing differentiated high and low socially anxious adolescents. On the basis of these findings, the authors concluded that the model can be used in the development of cognitive behavioural case formulations for socially anxious adolescents, to understand symptoms and thus to guide treatment planning. The clinician can use a case formulation based on such a model when working with socially anxious adolescents in order to determine the value of certain therapeutic techniques to deal with maintaining factors (e.g., task concentration training to manage self-focused attention; Bögels, 2006). Studies into other cognitive models of anxious symptoms indicate that such models may also be relevant to adolescent clients. For example, Laugesen, Dugas, and Bukowski (2003) reported that a previously developed adult model of the cognitive processes involved in worry (Dugas, Gagnon, Ladouceur, & Freeston, 1998) could also effectively be applied to adolescents, and should be used to guide treatment of adolescent worry.

Currently, most models of anxiety only focus on a particular type of anxiety disorder and fail to include other comorbid problems such as depression (Ollendick et al., 2008). When working with anxious adolescents, such models may be less helpful in the preparation of the cognitive behavioural case formulation because it is commonly observed that anxious and depressive symptoms co-occur in young people (e.g., Schniering & Rapee, 2004). Models which have been developed in accordance with the 'cognitive specificity hypothesis' of anxiety and depression may be more helpful. According to this hypothesis, certain cognitive content and cognitive processes may be specific to particular disorders (Beck & Perkins, 2001). Therefore, when developing cognitive behavioural case formulations for anxious adolescents with comorbid depression, elements of cognitive models of depression can be combined with models of anxiety in order to best represent the problems experienced by the young person and provide links to suitable treatment strategies.

Some models of the development and maintenance of anxiety in young people pay special attention to family and parental factors (Ballash, Leyfer, Buckley, & Woodruff-Borden, 2006; Ginsburg & Schlossberg, 2002; Rapee, 1997) and the broader social context of the young person (Dummett, 2006). According to Wood, McLeod, Sigman, Hwang, and Chu (2003), for example, an important factor in anxiety in children and adolescents is parental intrusiveness, whereby parents take over tasks which children or adolescents are able to perform independently, resulting in low self-efficacy and a lack of mastery experiences in the young person. Wood et al. (2003) suggested that children with a history of parental intrusiveness may experience new

situations as anxiety-provoking due to their beliefs about their own inability to deal with challenges. In contrast, autonomy-granting parents encourage their children to engage in new situations or tasks by themselves, thereby stimulating feelings of mastery and self-efficacy. Chorpita and Barlow (1998) similarly viewed parental control as an important factor which may contribute to the onset and maintenance of anxiety symptoms in children and adolescence. They suggested that such familial characteristics can increase the risk of a child developing cognitions relating to a low sense of control. In later development, these cognitions may become activated by negative life events and external stressors, resulting in the experience of anxiety. In the case of anxious adolescent clients, current *and* past parenting behaviours, in particular in relation to the developmental task of autonomy development, ought to be considered when preparing cognitive behavioural case formulations, in order to more fully understand their potential influence on the adolescent's current anxiety-related behaviours, cognitions and emotions.

Depending on the developmental capacities of the young person, the extent of collaboration in the construction and presentation of the cognitive behavioural case formulation can vary. With less mature clients, or when the client does not believe in or understand the cognitive model, the clinician may choose not to explicitly share the formulation with the young person. Alternatively, the clinician can 'construct' the cognitive behavioural case formulation and share (parts of) it with the young person to help them to better understand their difficulties. For example, the clinician may initially only discuss emotions and automatic thoughts in reaction to situations with the young person, and share hypotheses about more abstract cognitive constructs such as core beliefs when it is judged that the young person is 'ready' (Drinkwater, 2005). Involving the young person in the process of constructing a cognitive behavioural case formulation can promote a sense of control over the way in which their treatment progresses and the means used to achieve their own goals for treatment. This sense of control may be especially motivating for adolescents, given their strivings for autonomy (Drinkwater, 2005).

### ***Selecting, sequencing, and dosing treatment components***

It is widely understood that CBT is not a unitary treatment; rather, it consists of various components (represented by different techniques such as systematic desensitization, cognitive restructuring, etc.) which may or may not be employed with a specific client, and which may be applied to a greater or lesser extent with one client relative to another client (Kendall, Gosch, Furr, & Sood, 2008). Individual differences in biological, social-emotional, psychosocial, and cognitive development are important factors to consider when making decisions about the selection and dosing of the various components.

Weisz & Hawley (2002) recommend the 'modularization' of treatment as a way of planning treatment such that it best meets the individual needs of adolescent clients.

According to the authors, a 'modularized' treatment protocol can be conceptualized as a collection of therapeutic techniques which can be selected and applied as modules, or "tools in a toolbox", based on the individual client's case formulation (p. 35). Using a modularized approach to CBT, the clinician can adjust the type of therapeutic techniques to be delivered, the extent to which a module is addressed during treatment (i.e., frequency and duration), as well as the sequence in which the various modules are introduced, according to the qualities and vulnerabilities of the client in question. For example, adolescent clients with both anxiety and depression can be offered a treatment module comprising activity scheduling, a module comprising exposure, and a module comprising cognitive restructuring.

Chorpita and colleagues (e.g., Chorpita, Becker, & Daleiden, 2007; Chorpita & Daleiden, 2004; Chorpita, Daleiden, & Weisz, 2005) are leaders in the field of modularized CBT for young people. They reviewed available treatments for many child and adolescent disorders and identified a number of 'common elements', the most frequently occurring discrete clinical techniques used as part of a larger intervention plan (Chorpita et al., 2005). They then developed evidence-based 'profiles' which 'matched' these common elements components to certain child and adolescent psychopathology. According to Chorpita and colleagues (2007), the clinician can use these profiles to create developmentally-appropriate, individually-tailored and empirically-supported packages made up of a number of 'modules' which are based on elements of pre-existing manuals. This approach to planning treatment is presented in a recently published treatment manual for anxiety disorders in children and adolescents (Chorpita, 2007). The treatment manual includes modules for the young person and parents which are aimed at tackling the anxiety symptoms, as well as other comorbid problems when present (e.g., oppositional behaviour). Similarly, our modularized CBT for anxiety-based school refusal in adolescence contains a number of standard or 'core' modules (e.g., psychoeducation, goal-setting, cognitive therapy) together with 'optional' modules selected on the basis of the cognitive behavioural case formulation (Heyne, Sauter, & Van Hout, 2008). For example, an optional module on 'activity scheduling' was incorporated in the CBT program because of the high levels of comorbidity between anxiety and depression, and the high levels of depression in adolescence (Essau, 2008; Ferdinand, de Nijs, Van Lier, & Verhulst, 2005; Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993).

### ***Tailoring the selection and delivery of behavioural and cognitive therapeutic techniques***

It is often suggested that adolescents are well-suited to participation in CBT because of their growing cognitive capacities (e.g., Forehand & Wierson, 1993; Weisz & Hawley, 2002). For some young people, the clinician's use of cognitive therapeutic techniques will have the intended positive effect of stimulating the young person to deal with emotional and behavioural difficulties. For other young people, cognitive techniques



may be confusing or cause frustration (Werner-Wilson, 2001). We propose a nuanced perspective which takes account both the extent to which behavioural and cognitive techniques are differentially emphasized, and the selection and delivery of specific cognitive therapeutic techniques.

According to Willner (2006), it is not simply a question of 'whether or not' to employ cognitive therapeutic techniques. Rather, it is a question of the relative emphasis to be placed on behavioural techniques and cognitive therapeutic techniques. Unfortunately, the question of how important it is for young people to be engaged in behavioural techniques versus cognitive techniques has received very little empirical attention (Stallard, 2009). Silverman and colleagues (1999) investigated the relative efficacy of behaviourally-based contingency management (e.g., reinforcement and extinction) and more cognitively focused self control procedures (e.g., self-evaluation) for anxious children and adolescents aged 6 to 16 years. Both treatments were equally effective in reducing parent and child-reported anxious symptoms at post-treatment and up to 12-month follow-up. However, between-condition differences were observed on some measures, in favour of the cognitively-oriented self-control treatment. Ultimately, the authors suggested that either of these approaches can be effective in treating anxiety in young people. In the absence of empirically-informed guidelines for decision-making about the use of cognitive techniques vis-à-vis behavioural techniques or their combination, alternative factors need to be considered.

Numerous authors have suggested that when an adolescent client seems to have difficulty engaging in cognitive therapeutic techniques, the clinician can include more concrete, behaviourally-based activities and 'real-life' practice opportunities (D'Amico et al., 2005; Friedberg & McClure, 2002; Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 1998; Stallard, 2009; Zarb, 1992). By "learning through doing", the young person's cognitions may be indirectly challenged (Stallard, 2009, p. 160). In the same way that behaviourally-based techniques are especially suited to younger anxious children (i.e., exposure, relaxation training, and modelling; Bouchard, Mendlowitz, Coles, & Franklin, 2004; Werner-Wilson, 2001), anxious adolescents with lower cognitive capacity (i.e., similar to that of younger children) may also profit from a greater emphasis on behavioural techniques. An additional factor influencing the extent to which behavioural techniques and cognitive techniques are employed is the clinician's formulation of the presenting problems. Daleiden et al. (1999) argued that the internal processes which trigger psychopathology in less cognitively advanced young people may play less of a role in the continuation of the symptoms relative to socialization factors and environmental triggers. In such cases, the targeting of cognitions may be less relevant.

A second consideration concerning the tailoring of CBT delivery applies to the selection and delivery of the cognitive therapeutic techniques. The selection of techniques rests upon an understanding of the variability in how complex and cognitively demanding the various techniques are. As noted by DiGiuseppe (1981),

"...therapy techniques may best be viewed along a continuum of procedures that can be used with [young people] of different cognitive ability" (p. 61). Holmbeck and colleagues (2006) similarly proposed that different 'levels' or versions of cognitive therapeutic techniques should be available within a CBT program. Less cognitively demanding strategies can be applied with less cognitively mature adolescents, while interventions requiring higher level cognitive capacities may be more relevant to adolescents who have attained greater proficiency in CBT-relevant cognitive capacities. A recent example of a treatment containing different levels of cognitive therapeutic techniques is Chorpita's (2007) CBT for anxious youth. This manual contains several modules which represent cognitive therapeutic techniques of differing complexity, selected according to the cognitive capacities of the young person.

Various authors have provided frameworks and suggestions as to which cognitive therapy techniques are more or less 'complex'. Merrell (2001) developed an index of intervention strategies (including cognitive therapeutic techniques) for depression and anxiety in young people. The strategies were organized according to their suitability for different ages and suggestions were made for adapting the techniques to increase their applicability for older or younger youth. According to Merrell (2001), the cognitive therapeutic technique 'cognitive replay' (for identifying automatic thoughts) can be used with young people of all ages, although less mature young people will need "more structure and feedback" (p. xix). Other 'less complex' cognitive therapeutic techniques seen to be suited to less cognitively advanced adolescents may include self-instructional training (Friedberg & Gorman, 2007; Ollendick et al., 2001), self-monitoring (Harrington, 2005), and the use of coping statements (DiGiuseppe, 1981; Kingery et al., 2006; Stallard, 2009; Zarb, 1992). Psychoeducation can also be a simple technique for correcting certain maladaptive or distorted beliefs, such as when the clinician provides information about the course, presentation, and prevalence of a disorder (Willner, 2006). The 'more complex' cognitive therapeutic techniques regarded as most beneficial for adolescents with a higher level of cognitive development include identifying different levels of cognition (i.e., automatic thoughts as well as cognitive errors and unhelpful thinking styles; Stallard, 2009), the 'downward-arrow technique' (Merrell, 2001), Socratic questioning (Siqueland et al., 2005), formal examination of underlying beliefs and assumptions (Harrington, 2005; Zarb, 1992), as well as decatastrophization and logical analysis (DiGiuseppe, 1981; Friedberg & Gorman, 2007; Kearney, 2005). Some adolescent clients with more sophisticated reasoning abilities may even experience the 'less complex' cognitive therapy techniques as irrelevant and unhelpful. As noted by several authors (DiGiuseppe, 1981; Manassis, Avery, Butalia, & Mendlowitz, 2004), such adolescents may regard the use of coping self statements as less useful if these statements are not derived in the context of cognitive restructuring.

In addition to the decision to employ specific cognitive techniques, decisions can be made about the manner in which the techniques are delivered. The clinician

can consider the extent to which an adolescent client will need extra guidance (e.g., in the form of concrete instructions) and practice (Oathamshaw & Haddock, 2006; Willner, 2006). Some adolescents may benefit from earlier or greater attention to the cognitive therapy techniques in CBT. For example, the clinician may quickly socialize the young person into the cognitive therapy model in order to prepare them for earlier engagement in cognitive therapy techniques (Siqueland et al., 2005). Further, when the young person is able to identify and articulate their thoughts and feelings with minimal clinician guidance, the clinician might spend less time helping the young person learn techniques for identify unhelpful thinking, and more time on complex and refined discrediting strategies (Kingery et al., 2006).

For some young people, the cognitive demands associated with acquiring new knowledge and skills may impede the acquisition and use of cognitive therapeutic techniques (Werner-Wilson, 2001). Suggestions have been made about 'priming' CBT-relevant cognitive capacities in young people prior to engaging them in cognitive-behavioural interventions (Holmbeck et al., 2006; Shirk, 1998). For example, very early on in CBT a young person might be provided with opportunities to practice the self-monitoring of thoughts in order to improve their receptiveness to cognitive interventions employed later on. Such priming has been described in reference to younger children (e.g., Grave & Blissett, 2004) and adults with intellectual disabilities (e.g., Dagnan, Chadwick, & Proudlove, 2000), and it is likely to be most helpful when the skill being trained is in the client's 'zone of proximal development' (Vygotsky, 1978). In this way, we might regard the priming of cognitive capacities as a type of 'scaffolding' for cognitive therapy. The clinician works to enhance emerging CBT-relevant cognitive capacities prior to formally commencing cognitive therapeutic interventions. When delivering CBT with anxious children and adolescents, the young person may be helped to develop skills in monitoring and recording predicted anxiety levels (Bouchard et al., 2004). Given that many adolescents have a greater capacity for thinking about the future, the suggestion by Bouchard and colleagues may be particularly pertinent for this group.

### **Enhancing motivation and engagement in treatment**

The capacity to learn and to use the skills included in a CBT program is fundamental to engagement in CBT, but capacity is certainly not the only determinant of engagement. Engagement in CBT, as described by Shirk and Karver (2006), involves developing a therapeutic alliance; being open to applying strategies aimed at achieving changes to thoughts, feelings and behaviours; and being actively involved in treatment during and between sessions. According to Willner (2006), a client's willingness or motivation to engage in treatment and to remain engaged in treatment may be just as important to treatment success as is having the capacity to use treatment skills. Weisz and Hawley (2002) proposed that low motivation for treatment may negatively influence the development of the therapeutic alliance between the adolescent client and the

clinician, which in turn may reduce engagement in treatment and have a detrimental effect on treatment success.

An adolescent's motivation for treatment and for engagement in treatment can be influenced to some extent by developmental factors (Holmbeck et al., 2006). The social context impacts upon the life of the adolescent, and this is true with respect to participation in treatment. It is often others in the adolescent's context (e.g., parents or school staff) who make decisions about the adolescent getting help. When adolescents are referred for treatment by other parties they may not experience their 'problem' as one needing treatment (McAdam, 1986; Rubenstein, 2003; Weisz & Hawley, 2002). Young people with anxiety may be afraid to give up inappropriate coping strategies (e.g., avoidance), play down or deny the negative consequences of their anxieties, and be reluctant to engage in treatment (Stallard, 2009). Adolescent 'egocentrism' and a reduced capacity for self-reflection are other developmental factors that can make it difficult for some young people to accept their difficulties (Bedrosian, 1981). According to Stallard (2002b), the adolescent's desire to function autonomously can lead to frustration regarding their inability to 'solve their own problems' which can lead to resistance, detachment or disengagement from treatment. As noted above, impairment in the therapeutic alliance can then affect the adoption and generalization of adaptive coping skills.

The adolescent client's motivation for treatment warrants early and continued attention. In the early phase of treatment, the clinician can assess motivation via self-report measures (Weisz & Hawley, 2002). Schmidt (2005) recommended incorporating an informal in-session investigation of motivation during CBT with young people. Strategies to assess and stimulate motivation recommended by Schmidt include: i) using a visual analogue scale to measure the willingness to change; ii) providing extra psychoeducation; iii) boosting the client's confidence in their ability to change; iv) questioning around discrepancies between values and current behaviours; and v) orienting the client to their own personal goals. With respect to this last point, Stallard (2002b) also noted that working together with the young person to set goals can increase motivation for engagement in treatment, as can encouraging the young person to offer input for the agenda for each session. Explaining clearly to the adolescent 'what's in it for them' in terms of the potential costs and benefits of treatment, and even proposing a time-limited agreement in which to evaluate the benefits of the sessions may help to engage even the most resistant young person in CBT (Angelosante, Pincus, Whitton, Cheron, & Pian, 2009; Bedrosian, 1981; Oetzel & Scherer, 2003; Wilson & Sysko, 2006). Clinical experience suggests that using 'adolescent-relevant' means of communication before and between sessions (e.g., an email to invite the young person to attend the first session) can enhance their motivation for treatment. Many of the foregoing points are reflective of Motivational Interviewing techniques which have been recommended for increasing the engagement of anxious clients (Stallard, 2009) and adolescent clients (Wilson & Sysko, 2006).

CBT is in itself already oriented towards enhancing client motivation for change and engagement in treatment. An essential characteristic of CBT is the “collaborative empiricist stance” of the CBT clinician (McAdam, 1986, p. 6), and this stance is regarded as a necessary ingredient for successfully building a therapeutic alliance (Friedberg & Gorman, 2007; Kingery et al., 2006). Because adolescents differ in the degree to which they are able to co-operate with the clinician as an ‘equal partner’, the clinician would ideally modify their approach accordingly. Adolescents with a greater ability to self-reflect and to control their impulses can be encouraged to collaborate more with the clinician (e.g., increased involvement in, and control over, the treatment planning process; Chronis et al., 2006; Forehand & Wierson, 1993). Less mature adolescents may benefit from the clinician’s use of a more directive approach (e.g., setting the agenda and determining the session content; Friedberg & Gorman, 2007; Friedberg & McClure, 2002).

Oetzel and Scherer (2003) argued that a judicious use of empathy and positive regard is an essential tool to motivate adolescents for treatment. The clinician can help adolescent clients to ‘save face’ and to boost their self-esteem by empathically responding to their problems and paying attention to areas of the young person’s life which are going well. By so doing, the clinician works with and not against the ‘egocentrism’ which often characterizes an adolescent’s view of themselves and their position in the world (Stallard, 2002b). However, too much empathy can seem less than genuine. Because adolescents seem to be able to detect insincerity and ‘fakeness’ from a mile away, they may respond better to “disciplined, benevolent frankness” (Edgette, 1999, p. 40). The extent to which adolescent clients may be intrigued or else confused by such ‘frankness’ will vary, and the use of this motivational strategy needs to be carefully tailored to the individual client (Edgette, 1999; Oetzel & Scherer, 2003).

Clinical experience suggests a number of strategies that may help to motivate and engage young people in CBT for anxiety. Due to their strivings for autonomy, allowing adolescent clients to have input into the nature of exposure tasks to be conducted in-session and between-sessions, can enhance their co-operation with treatment plans (Kendall et al., 2005; Ollendick, 1995). For example, Heyne and Rollings (2002) recommended giving adolescents with anxiety-based school refusal more input into the decision-making about the type of exposure to be engaged in (i.e., graded school return vis-à-vis immediate full-time return). While having a say in the type of exposure tasks may be useful to motivate some young people, Angelosante and colleagues (2009) suggested that adolescents may also value increased clinician guidance of exposure tasks, to give them an extra ‘push’ to confront anxiety-provoking stimuli. The authors also recommend reminding the anxious adolescents of the potential positive effects of treatment to reduce resistance to engaging in exposure.

Heyne and Rollings (2002) also noted that it can be particularly challenging to engage anxious adolescent school refusers in treatment. They used an acronym (i.e.,

HARD GOING) to encapsulate behaviours and attitudes which the clinician can employ to increase the likelihood that an adolescent client will be engaged in treatment. These include: Honouring the client’s perspectives; Active listening; Relating to the young person in an understanding and tolerant manner; Demystifying the young person’s experiences of the intervention process; (attending to broader) Goals of the young person; (the fostering of positive) Opinions about the young person; (informed) Interpretations of a young person’s behaviour in treatment; Negotiating with the young person about the process of treatment; and Going about engaging the young person in treatment in a cautious and realistic manner.

### **Tailoring treatment language, materials, activities, and the tempo of treatment delivery**

It is often noted that many of the CBTs applied with adolescents have been downward extensions of treatment protocols designed for adults or upward extensions of protocols designed for children (D’Amico et al., 2005; Eyberg et al., 1998; Holmbeck et al., 2006; Weisz & Hawley, 2002). Characteristics of these adult and child protocols – including language, materials, activities, and tempo of treatment delivery – do not automatically ‘fit’ the developmental needs of the adolescent age group. Adult protocols can be too ‘taxing’ for the adolescent, and as noted by Southam-Gerow et al. (2001), the exercises and assignments associated with child protocols may be experienced by older youth as “somewhat childish” (p. 432). For treatment to be “real and relevant” for the young person (Friedberg & Gorman, 2007, p. 188), developmental tailoring would ideally occur with respect to language, materials, activities, and the tempo of treatment delivery. This tailoring can facilitate the adolescent client’s engagement in treatment, which in turn increases the likelihood that the knowledge and skills addressed in sessions are understood and applied.

The question of language use in treatment has been discussed by many authors, including authors concerned with tailoring CBT for anxious adolescents (e.g., Siqueland et al., 2005). Complex therapeutic concepts can be made less adult-oriented and more ‘adolescent-friendly’ by employing the client’s own vocabulary; using clear, simplified language; and by giving specific, task-orientated instructions (Ginsburg & Drake, 2002; Kingery et al., 2006; Wilson & Sysko, 2006). At the same time, adolescent ‘slang’ and idiom must be used carefully, as they may come across as unnatural or fake (Friedberg & McClure, 2002). Likewise, simplification in the form of concrete examples and basic terms may appear condescending for some mature adolescents (Oetzel & Scherer, 2003; Werner-Wilson, 2001). These mature adolescents may profit more from a detailed rationale for why the therapeutic techniques are useful (Braswell & Kendall, 2001; Ollendick et al., 2001; Zarb, 1992). A further language-based consideration arises out of the tendency for adolescents to think in ‘black-and-white’ terms (e.g., “good” versus “bad”; “right” versus “wrong”) (Wilkes et al., 1994). Stallard (2002b) suggested that the clinician use terms which

imply dimensionality (e.g., “better” and “worse”) rather than dichotomy, in order to neutralize such typical adolescent thinking. When delivering cognitive therapeutic interventions, the clinician may speak of “less anxiety-producing thoughts” and “more anxiety-producing thoughts.”

Metaphors and mnemonic aids are other language-based strategies which can help young people to learn and remember the steps of certain therapeutic techniques (Kendall et al., 2002). Well known examples are the ‘FEAR’ and ‘FRIENDS’ acronyms representing the key steps for managing anxiety in respectively the Coping Cat (Kendall, 2000) and Friends for Youth (Barrett, Lowry-Webster, & Turner, 2000) CBT programs. Friedberg and McClure (2002) suggested the use of a ‘caterpillar’ (unhelpful) thoughts and ‘butterfly’ (helpful) thoughts metaphor for younger children. More adolescent-appropriate metaphors also exist. Automatic thoughts can be positioned as ‘pop-ups’, or ‘spam’ in your computer, and dealing with negative thoughts a process of “building a better firewall” (Stallard, 2009, p. 160). A mnemonic like WWW.Problem-solved.com may be particularly relevant for adolescents, representing the steps of problem solving (What is the problem?; What are the options for solving the problem?; Which will I choose?; Is the Problem solved?).

The extent to which therapeutic activities are verbally-based or non-verbally based can be adapted to match individual differences in adolescent clients. For example, increases in social perspective taking skills and fears of negative evaluation may lead some adolescents to feel embarrassed about talking about their anxieties (Hudson et al., 2002; Stallard, 2009). Some adolescents may therefore feel uncomfortable with face-to-face dialogues and with ‘why’ questions during treatment (Bedrosian, 1981). For these young people, the suggestions made by Bailey (2001) and Bedrosian (1981) seem fitting. That is, it may be useful to reduce the number of didactic explanations and the amount of ‘deep and meaningful time’ to avoid awkward silences, choosing instead to engage the adolescent in informal but therapeutically-relevant conversation during therapeutic activities. Other adolescents will be highly ‘talkative’ and their verbosity can have the potential to interfere with engagement in specific CBT-related activities. In these cases, the clinician can structure client ventilation through the application of interviewing skills such as summarizing, minimal encouragers, and reflections (Edgette, 1999, 2002; McAdam, 1986).

Treatment which is not solely verbally based, but which involves materials providing pictorial representations of treatment-related tasks, may help to engage children and adolescents in treatment and allow them to more effectively apply therapeutic tasks (Grave & Blissett, 2004). Visually-oriented materials which can be used when delivering CBT with adolescents include: i) handouts, for example, presenting somatic anxiety symptoms (e.g., Stallard, 2002b); ii) a flip-over or a whiteboard; iii) visual analogue scales for rating the strength of emotions or thoughts (e.g., Chorpita, 2007); iv) pictures/drawings to identify self-talk (e.g., thought bubbles; Kendall, 2000); and iv) diagrams when challenging maladaptive thoughts

(e.g., responsibility and tolerance pies, the awfulising scale; Friedberg & McClure, 2002). However, the clinician must ensure that these materials are matched to the developmental level of the young person; adolescents in particular may find some materials patronizing or juvenile (Stallard, 2009).

Just as visually-oriented materials can enhance engagement in treatment, so too can the use of enactive procedures. Activities involving real-life demonstrations, such as games, role plays or visualization exercises can stimulate active participation in the therapeutic process (Hoffman & Mattis, 2000; Siqueland et al., 2005). An activity like ‘thought football’ (Friedberg & McClure, 2002), used to detect automatic thoughts, may be particularly appropriate for adolescents due to its interactive and playful approach. The clinician asks the young person to throw balls of paper into a hoop, and the young person must say what they think and feel about every attempt they have made. When combined with guided questioning by the clinician, this activity can help the young person to more quickly become aware of their inner dialogue. For example, the client can be asked to observe what happens to their thoughts and feelings when the clinician increases the pressure on the young person by making negative predictions (e.g., “you’ll miss it for sure”). Stallard (2009) suggested that drawing, writing poetry, or composing songs may also be therapeutic activities which may be useful in allowing adolescents to describe their thoughts and feelings. Role plays, in which the client and clinician apply therapeutic techniques, can be especially helpful in preparing the client for challenging situations in ‘real life’. In the case of social anxiety, adolescents can engage in in-session role plays to practice activities they find anxiety-provoking, such as initiating conversations, asking someone out on a date, or giving a talk (Albano, Marten, Holt, Heimberg, & Barlow, 1995). However, the young person’s level of abstract reasoning may limit their ability to participate in role plays (Holmbeck et al., 2000). In these cases, the clinician may choose to firstly work with cartoon sequences which tell a story, prior to engaging the young person in short and structured role plays.

Two recent developments focused on CBT for anxious adolescents incorporate developmentally-sensitive recommendations for treatment materials and activities. Cunningham and colleagues (2009) described the development of the Cool Teens program, CD-ROM-based CBT for anxious adolescents. This interactive media allows the adolescent to choose the order and tempo with which they cover the treatment modules. The high degree of personal control was regarded as particularly suited to adolescent clients in view of their strivings for independence. Further, the graphics (cartoons and animations), sound effects, and live video content were developed in consultation with adolescents to ensure that the materials would be relevant to the target age group. Another recent CBT for anxious young people is the BRAVE-ONLINE program developed by Spence et al. (2008). This program has a separate adolescent version for 13 to 17 year olds. Relative to the child version, the adolescent version includes more complex psychoeducational information, more advanced graphics, and

more interactive activities such as quizzes.

Other developmentally-oriented recommendations are found in the literature focused upon exposure, a major component of CBT for anxiety. Kendall et al. (2005) and Kingery et al. (2006) suggested that the clinician make developmentally-informed decisions about: i) the type of exposure tasks to focus upon (e.g., considering situations more likely to be avoided in adolescence, such as eating in the school canteen); ii) the complexity of information provided in the rationale for engaging in exposure tasks (e.g., less mature young people may benefit from a clear and concise explanation of how exposure 'works'; more mature young people may benefit from a detailed and theoretical explanation of the mechanisms of the technique, to increase their understanding of how they themselves can deal with their distress); and iii) the type of monitoring that the young person can carry out by themselves (e.g., less mature young people may require a simplified scale to indicate the intensity of anxious symptoms). Siqueland et al. (2005) also suggested that anxious adolescents may be encouraged to engage in more between-session exposure tasks relative to anxious children (Siqueland et al., 2005). The question of parental involvement in exposure tasks with adolescents is addressed in the following section.

Finally, consideration needs to be given to the tempo at which the CBT program is delivered with adolescent clients. According to Bailey (2001) and Bedrosian (1981), a reduced concentration span, combined with the cognitively demanding nature of self-disclosure and self-reflection, signal the value of conducting shorter CBT sessions with children, and with adolescents. Session agendas are a common element of CBT, and these agendas are important for the optimization of treatment time. The process of developing a session agenda with an adolescent needs to account for the range of developmental issues already mentioned (e.g., the extent of participation in setting up the agenda in line with the adolescent's level of autonomy development; attention to important adolescent tasks and transitions in terms of agenda points) (McAdam, 1986). An example in which clinicians have adjusted the tempo of a CBT program for anxious adolescents can be found in Siqueland and colleague's (2005) attachment-based family CBT. It was suggested that the primary skills addressed in the adolescent sessions (i.e., recognizing anxious symptoms; identifying anxious cognition; developing a plan to cope with the situation; and evaluating and reinforcing one's performance) can be taught more quickly to adolescents relative to children (i.e., in three to four sessions as opposed to the eight sessions specified in a related CBT manual for anxious children).

### **Involving parents in treatment**

Parents play a significant role in the life and 'developmental trajectory' of their adolescent child. By the same token, parent and family factors may be associated with the development or maintenance of anxiety disorders (for a more detailed discussion of the role of parent and family factors in the aetiology of child anxiety, see Bögels

& Brechman-Toussaint [2006] and Ginsburg & Schlossberg [2002]). Understandably, it is argued that it is fruitful, and sometimes even necessary to involve parents in interventions for anxious adolescents (Bögels & Siqueland, 2006; Ginsburg & Schlossberg, 2002; Kendall & Holmbeck, 1991).

Current conceptualizations of parent involvement in child and adolescent CBT can help to determine just what kind of role parents might have in the treatment of adolescent anxiety. A commonly cited conceptualization views the parent role as one of 'consultant' and 'facilitator', 'collaborator' and 'co-clinician', or 'co-client' (e.g., Barmish & Kendall, 2005; Kendall, 2000; Stallard, 2009). When parents are involved as 'consultants' they do not actively participate in treatment per se, but they receive psychoeducation about the treatment principles and strategies applied by the clinician and help the clinician by providing information about the young person (Stallard, 2009). This information is used to shape the course of treatment with the young person. Parents can also be responsible for getting the young person to treatment sessions (Kingery et al., 2006). As 'collaborators', parents can assist their child with the application of therapeutic skills outside of the clinical setting, conforming to the 'transfer of control' model (i.e., transfer of knowledge and skills from the clinician to the parents, and then from the parents to the young person; Silverman & Kurtines, 1996). For example, the parents can coach their child through the exposure task by preventing evasion of the task, and by prompting and rewarding them upon successful completion. They can also play a key role in monitoring treatment gains (Barmish & Kendall, 2005; Suveg, Roblek, et al., 2006). Parents can also be involved in CBT as 'co-clients'. The clinician works with the parents to enhance their use of behaviour management strategies aimed at modifying their child's problematic behaviours or their own behaviours which may be involved in the maintenance of the child's anxiety (Chronis et al., 2006; Hudson et al., 2002; Martin & Thienemann, 2005; Suveg, Roblek, et al., 2006). In addition, parental cognitions which impede the effective use of behaviour management strategies can be explored and challenged (Heyne & Rollings, 2002; Joyce, 1994; Suveg, Roblek, et al., 2006). Problematic thoughts and beliefs may relate to the developmental appropriateness of the child's behaviours, the perceived coping capacities of the child, and the ways in which parents should respond to a child's anxiety symptoms (Kingery et al., 2006; Nauta, Scholing, Emmelkamp, & Minderaa, 2003; Suveg, Roblek, et al., 2006).

Current parenting behaviours need to be considered when making decisions about the nature of parent involvement in treatment for adolescents. 'Over-involved' or intrusive parents may have the tendency to 'rescue' their children from anxiety-provoking situations, which can result in the young person having fewer opportunities to deal with challenges in an autonomous manner (Suveg, Roblek, et al., 2006; Wells & Albano, 2005; Wood et al., 2003). It may therefore be desirable to engage these parents as 'co-clients' so they can learn skills to address these behaviours which may be involved in the maintenance of their child's anxiety. 'Under-involved' parents

may believe that their teenage child is 'old enough and wise enough to solve their own problems' (Wells & Albano, 2005). These beliefs may prevent parents giving the young person the supportive and firm guidance that they may need when they are unable to 'face their fears' by themselves. If the beliefs and behaviours of under-involved parents prove to be rigid, the clinician can shift clinical attention to increasing the young person's coping repertoire and exploring the social network for other sources of support for the young person (Wells & Albano, 2005). In either case, extremes of parental under- or over-involvement are not conducive to treatment success, and a balance between the two is seen to be the most desirable (Suveg, Roblek, et al., 2006).

Developmental factors also warrant close attention when determining whether and how to involve parents in CBTs for young people's problems (Albano & Kendall, 2002; Barrett, 2000; Kendall & Choudhury, 2003; Stallard, 2009). The large individual differences across the adolescent period and amongst adolescents of the same age are likely to influence what is optimal with respect to parent involvement. Less mature adolescents are more likely to have a stronger emotional orientation to and connection with their parents; these young people may have significant problems in managing their own anxieties if their parents are under-involved (Forehand & Wierson, 1993; Martin & Thienemann, 2005). According to Wolpert, Elsworth, and Doe (2005), parental prompting and monitoring of the child's use of cognitive-behavioural skills (i.e., parent as 'collaborator') is suitable for "younger children", and especially those with anxiety-related difficulties (p. 113). More mature adolescents are likely to identify more strongly with peers and to attempt to increase their autonomy from parents; these young people may rebel and resist offers of help if parents are (over-) involved (Kingery et al., 2006). The limited parent involvement associated with the 'consultative' role can be particularly relevant for this group (Stallard, 2009). Indeed, adolescents may value highly the time spent alone with the clinician and become suspicious or resentful if the clinician meets regularly with their parents (Kingery et al., 2006). As noted by Wolpert et al. (2005), the limited involvement of parents has the potential advantage of empowering the young person. Wolpert and colleagues suggested that minimal parent involvement (i.e., parent as 'consultant') is best suited to "older children, who are highly motivated" (p. 112). Developmental factors may also influence decisions about which parent to involve: Bögels & Siqueland (2006) suggest that as fathers may be particularly important role models for adolescents, involving them in treatment may be essential in successfully combating adolescent anxiety.

In cases where parents of anxious adolescents have the tendency to be over-involved or under-involved, a number of recommendations may also be relevant. Wells & Albano (2005) recommended that the clinician working with over-involved parents recognize the parents' concerns, while simultaneously using psychoeducation to emphasize the developmental tasks of adolescence (e.g., autonomy development) and the implications for parenting (i.e., encouraging the young person in independent

problem solving rather than solving the problem themselves). In working with under-involved parents, the clinician can use psychoeducation to emphasize the fact that parents can play an important role in helping adolescents to 'face their fears'. For example, although the young person may seem 'all grown up' in terms of independence from their parents, they are still developing, and they need the guidance of parents to help them in this process (Hudson et al., 2002). In addition, young people who are anxious may sometimes act 'younger' than their chronological age (e.g., failing to see the consequences of their behaviour; displaying 'immature' behaviour such as crying or running away), due to their desire to avoid anxiety-provoking situations or stimuli.

In the treatment of adolescent anxiety, it is particularly important to consider the question of parent involvement with respect to exposure-based tasks. In an earlier study, Barlow and Seidner (1983) recommended that parents be involved in exposure practice in a CBT for adolescent agoraphobia. The authors reported that the adolescent participants seemed to be less able than adult clients to challenge their irrational cognitions related to the panic complaints (i.e., fears of dying). During exposure tasks, the adolescents turned to their parents for 'help' with dealing with the anxiety symptoms. How parents react to such requests from their children during exposure practices can range from 'directive' responses (e.g., physically guiding the execution of exposure practices between sessions), to 'supportive' and autonomy-granting responses (e.g., transporting the client to the exposure setting). Indeed, Siqueland and colleagues (2005) developed and evaluated a treatment in which the parents of anxious adolescents were helped to achieve a balance between 'directive' parenting and the granting of developmentally-appropriate autonomy. In the treatment, parents were engaged in discussions about their role in dealing with their teenage child's anxiety, and about the most appropriate type and level of involvement that the parents might have in their child's exposure practice. In addition, as co-clients, parents were helped to identify and re-examine beliefs about anxiety (i.e., as threatening, and something to be avoided) and beliefs about the role of parents with anxious children (e.g., to protect their adolescent child and themselves from anxiety-provoking experiences).

In a similar vein, a CBT program for anxiety-based school refusal in adolescence (Heyne et al., 2008) aims to help the parents of adolescent school refusers achieve a developmentally-appropriate balance between 'directive' parenting and 'supportive' autonomy-granting. Depending on the case formulation, and in particular the role that parenting may play in the maintenance of the school refusal, parents are helped to employ a more supportive, autonomy-granting role or, as required, a more 'directive', authoritative role. In the autonomy-granting role, parents issue gentle prompts for appropriate behaviour (e.g., successive steps towards return to regular school attendance) and reinforce such behaviour in a developmentally-appropriate way. At the same time, the adolescent is provided with opportunities to 'show that he/she can try to face the fear' without the direct involvement of parents. In the

more authoritative role, parents are helped to employ a firmer approach should this be required. In particular, they learn skills with which to extinguish inappropriate behaviour (e.g., arguments with parents about school return), and are helped to assume responsibility for determining the timing and process of their adolescent child's return to regular school attendance.

### Involving peers in treatment

During adolescence, the peer group becomes increasingly influential in the life of the young person. Adolescents often seek the company of friends rather than parents, and it becomes more and more important for the young person to have skills to be able to 'fit in' (Geldard & Geldard, 2004; Holmbeck et al., 2006). Given the sense of social isolation that many anxious young people experience, opportunities for involvement with peers can be especially important (Scapillato & Manassis, 2002; Kearney, 2005). Peers can significantly influence and impact on adolescent attitudes and behaviour, and interventions that include peer involvement may have increased efficacy (Jelalian, Mehlenbeck, Richardson, Birmaher, & Wing, 2006). In addition, feedback from peers can be more reinforcing than that from adults (Forehand & Wierson, 1993) and it can be very useful to have source of constructive support in the treatment program for the young person aside from the parents and the clinician. To identify suitable peers (e.g., siblings, classmates, friends), the clinician can ask the young person to nominate a suitable 'peer assistant', or query parents or teachers. Well-functioning friends, classmates or siblings can be included in treatment sessions to provide an opportunity for life-like situations in which young clients can practice the skills learned in treatment while still under the supervision of the clinician (La Greca & Prinstein, 1999). Peers could also be involved in between-session 'real-life exposures' to avoided social situations (e.g., walking to school together; spending time together in the lunch break).

Though the use of peers can be a powerful tool in the enhancement of social competencies, the clinician is advised to consider the level of the young person's social competency before involving a peer in treatment. For example, to maximize the success of a practice opportunity, Chorpita (2007) recommended that an anxious child or adolescent should have a basic level of competency before engaging in role playing with peers. For some young people, involving peers may be the last thing they would want, due to their desire to 'fit in' and the embarrassment and shame associated with being 'in therapy'. It is therefore important to involve adolescent clients in the decision-making around the (non)involvement of their peers.

Another way in which the clinician may capitalize on the influential role of the peer group during adolescence is to deliver of CBT in group format rather than in individual format. The results of a number of treatment outcomes studies with anxious children and adolescents indicate that group treatment is as efficacious as individual treatment (e.g., Liber et al., 2008). Group CBT with adolescents permits normalization

of experienced difficulties and opportunities for positive social interaction (Scapillato & Manassis, 2002). In the case of social anxiety, group members may participate in each other's exposures (Albano & Barlow, 1996). Albano (1995) even argued that, given the nature of social anxiety disorder, individual treatment for socially anxious adolescents would be "counterintuitive and counterproductive" (pp. 276-277).

### Future research directions

Future research into developmentally-appropriate CBT for anxious adolescents would ideally focus on three key research issues emerging from both the 'why' and the 'how' sections of the current review. The first of these issues is a need to continue to develop and test cognitive-behavioural models of adolescent anxiety. Empirically-supported models can then be used to inform further developments in adolescent-focused CBT protocols. Until now there have been very few models of anxiety which emphasize developmental psychopathological concepts when delineating anxiety in younger age groups, and the relevance of these models for anxious adolescents is still to be determined. There are some exceptions (e.g., Wood et al., 2003), but these models are yet to be systematically tested in the practice of CBT for anxious adolescents. The next generation of empirical studies into the aetiology of child and adolescent anxiety is underway, and such studies will ideally account for developmental factors (e.g., the relationship between autonomy strivings and avoidance behaviour), contextual factors (e.g., the role of parental factors in the maintenance of the problem), and the comorbidity common to adolescent anxiety (e.g., co-occurring depressive symptoms).

A second research implication concerns the systematic evaluation of developmentally-appropriate CBT for anxious adolescents. Researchers need to employ a developmental 'frame of mind' when planning clinical trials with this population. For example, barriers to adolescents' involvement in treatment outcome research need to be reduced. Parents, school staff and others in the community can be educated about the 'signs' of anxiety (e.g., avoiding class presentations; avoiding social contact with peers; avoiding school) and encouraged to refer adolescents showing such signs. Clinicians involved in such clinical trials can use 'adolescent-appropriate' means, such as regular e-mail contact during treatment to increase the likely uptake of treatment by adolescent clients and reduce drop-out. Developmentally-appropriate clinical trials will also modify clinical diagnostics and assessment (e.g., including developmentally-appropriate measures to assess pre- and post-treatment functioning); make use of developmentally-appropriate treatment manuals (e.g., modular treatments); account for developmental factors in determining treatment delivery mode (e.g., group versus individual CBT); and provide clinicians with training and supervision around the six key domains described in 'How can clinicians developmentally tailor CBT for anxious adolescents?' in this review. By monitoring the extent and quality of the clinicians' adherence to the six domains, researchers will be able to learn more about the merits

of designing and delivering developmentally-appropriate treatment.

Thirdly, it is important to explore the influence of developmental factors on the outcomes of developmentally-appropriate CBTs for adolescents. As noted, researchers frequently use age in analyses aimed at predicting treatment response. Young people of the same chronological age may vary greatly in developmental status. It is for this reason that Hudson et al. (2002) argued that more meaningful prediction analyses would make use of “measures specific to the important developmental forces” (p. 837). Wagner (2003) recommended that, alongside age, at least one other indicator of developmental status be included in developmentally-appropriate research and practice. Variables representative of these developmental forces include pubertal changes, changes in peer interactions, autonomy development, and changes in parenting behaviours (D’Amico et al., 2005). It is particularly important to assess CBT-relevant cognitive capacities with respect to their impact on treatment outcome. Development in CBT-relevant cognitive capacities may influence the extent to which a young person extracts meaning from, and applies cognitive therapeutic strategies. It might even be that the refinement of cognitive capacities due to engagement in cognitive therapeutic strategies mediates therapeutic gains (Holmbeck et al., 2006). Thus, development in cognitive capacities could be examined as both a mediator and a moderator of treatment outcome (Eyberg et al., 1998; Hudson et al., 2002). However, future studies are needed to elucidate exactly which cognitive capacities are relevant to adolescents’ successful participation in the cognitive therapeutic strategies encompassed in CBT, in which way these capacities can best be measured, and how valid the currently available tasks or questionnaires are.

## Conclusion

The purpose of this paper is to advance the use of developmentally-appropriate CBT for anxious adolescents. Having considered the question of ‘why’ it is important to use developmentally-appropriate CBT, we addressed the question of ‘how’ clinicians can best account for adolescent development. Our review of the literature suggested six key domains relevant to ‘how’ treatment can be designed or delivered in a developmentally-appropriate way. Each domain encompasses numerous clinical implications, and the implications vary in terms of their specificity to the topic: (a) how to conduct treatment with young people at different levels of development; (b) how to conduct CBT with young people at different levels of development; and (c) how to conduct CBT with anxious adolescents.

In terms of the implications for designing and delivering treatment with young people at different levels of development, several key points deserve to be highlighted. Tailoring treatment language, materials, and activities, as well as the tempo of treatment delivery according to the developmental level of the young person is essential when engaging both children and adolescents in treatment. Attention to motivation for treatment is indispensable when working with adolescent clients in

particular, given the influence that strivings for autonomy may have on engagement in the therapeutic process and on the therapeutic alliance. Peers may be able to play a supportive role in treatment, given the increasing influence of the peer group during the adolescent period. In addition, the flexibility that comes with modularized treatments may help the clinician respond to individual differences arising from biological, social-emotional, psychosocial, and cognitive development.

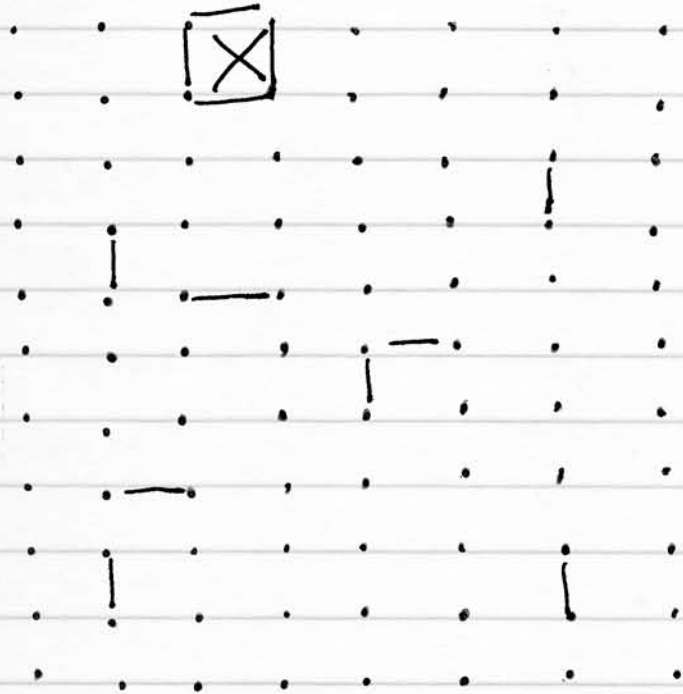
The clinical implications for designing and delivering CBT with young people at different levels of development are quite plentiful. The following key points are considered to be especially relevant to working with adolescents. When developing case formulations and determining targets for treatment, it is important that the cognitive-behavioural models take into account adolescent developmental tasks and transitions, contextual factors, and common comorbid disorders. Increased attention needs to be paid to the formal or informal assessment of CBT-relevant cognitive capacities. While the clinical judgments of some well-trained and highly-experienced clinicians may be valid, standardized assessment tools and procedures are likely to increase the validity and reliability of estimates of the capacity to engage in cognitive therapeutic interventions. Further, due to large intra- and inter-individual differences in the development of CBT-relevant cognitive capacities, it is prudent to retain a dimensional rather than a categorical perspective on the selection and delivery of the cognitive and behavioural therapeutic techniques contained in CBT. That is to say, the clinician can differentially emphasize the extent to which behavioural and cognitive techniques are selected and delivered to best match the capacities of the adolescent client.

A key clinical implication emerging from the review is that clinicians designing and delivering CBT keep in mind what anxious adolescents ‘*want* to do by themselves’ and ‘what they are *able* to do by themselves’, in terms of both their developmental capacities and the tendency to avoid anxiety-provoking situations or stimuli. The interaction between adolescent strivings for autonomy on the one hand, and anxiety-motivated avoidance on the other, can lead to ambivalence toward the therapeutic process, and at worst, reluctance to collaborate with the clinician and carry out the therapeutic tasks. A developmentally-appropriate balance between ‘supportive’ and ‘directive’ treatment delivery may best facilitate adolescents’ engagement in treatment, and in particular, in exposure tasks. This ‘developmentally-appropriate balance’ can be applied to all of the six key domains as described above. In particular, in view of the ‘transfer of control’ approach, the clinician should consider when it is best to involve parents in treatment in a more ‘supportive’, autonomy-granting role or a more ‘directive’, authoritative role in order to best stimulate the young person’s participation in therapeutic tasks.

In short, the suggestions described in the current review are an important response to the calls in the clinical and research literature for developmentally-appropriate treatment. Suggestions associated with six domains of treatment design



and delivery may serve as a guide for clinicians working with anxious adolescents, and for researchers involved in the creation and empirical evaluation of developmentally-appropriate CBTs. In turn, the knowledge arising from empirical evaluations will allow for more informed and appropriate decisions as to 'how' one can best conduct developmentally-appropriate CBT with anxious adolescents.



## Chapter 3

Assessing Therapy-Relevant Cognitive Capacities  
in Young People: Development and Psychometric  
Evaluation of the Self-Reflection and Insight Scale  
for Youth

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## Abstract

The effectiveness of cognitive-behavioural therapy with young people may be influenced by a young person's capacity for self-reflection and insight. Clinicians who assess clients' proficiencies in these cognitive capacities can better tailor cognitive and behavioural techniques to the client, facilitating engagement and enhancing treatment outcome. It is therefore important that sound instruments for assessing self-reflection and insight in young people are available. The aim of the current study was to translate and adapt the Self-Reflection and Insight Scale (SRIS) for use with a child and adolescent population (Study 1), and to evaluate the psychometric properties of the resulting measure, the Self-Reflection and Insight Scale for Youth (SRIS-Y; Study 2). In Study 1 (n = 145), the comprehensibility of the SRIS-Y was assessed in a community sample of children and adolescents. Study 2 (n = 215) then explored the reliability and structural, convergent, and divergent validity of the SRIS-Y. The SRIS-Y was found to be comprehensible to young people, and had good reliability and structural validity. It appears that the SRIS-Y is a sound instrument for assessing therapy-relevant cognitive capacities in young people, of potential benefit in both research and clinical contexts. Future research foci include the predictive validity of the instrument.

## Introduction

Treatment approaches which include strategies for cognitive change, such as cognitive-behavioural therapy (CBT), are commonly recommended for the treatment of psychopathology in children and adolescents. Indeed, there is increasing evidence for the short- and long-term efficacy of CBT for a range of difficulties in childhood and adolescence (e.g., Schmidt et al., 2007; Smith et al., 2007). However, while many young people treated with CBT experience clinically and statistically significant improvements, a large number of clients continue to present with symptoms post-treatment (e.g., Cartwright-Hatton, Roberts, Chitabesan, Fothergill, & Harrington, 2004).

The effectiveness of CBT for young people depends on a broad range of factors. Client-, clinician-, and treatment-related variables (specific and non-specific) all potentially predict treatment response in child and adolescent psychotherapy (March & Curry, 1998). One likely cause of poorer treatment outcomes is a mismatch between the type or level of treatment provided, and the client's CBT-relevant cognitive capacities<sup>5</sup>. Researchers and clinicians commonly make reference to the importance of cognitive capacities such as abstract reasoning, cognitive flexibility, and psychological mindedness for young people's engagement in CBT (e.g., Holmbeck, O'Mahar, Abad, Colder, & Updegrave, 2006; Quakley, Reynolds, & Coker, 2004; Sauter, Heyne, & Westenberg, 2009). These capacities allow young people to identify and discriminate their own thoughts, feelings, and behaviours, and to objectively identify causal relations between them. Indeed, such cognitive capacities are seen to be important for successful engagement in cognitive therapeutic strategies, such as the identification, refutation, and adaptation of maladaptive cognitions (Doherr, Reynolds, Wetherly, & Evans, 2005; Grave & Blissett, 2004). While several studies have demonstrated that even children as young as five years can engage in some meta-cognitive tasks (Flavell, Green, & Flavell, 2000; Quakley, Coker, Palmer, & Reynolds, 2003), there are likely to be considerable intra- and inter-individual differences in the development of these cognitive capacities (Bacow, Pincus, Ehrenreich, & Brody, 2009; Holmbeck et al., 2006).

Psychological mindedness (PM) is a cognitive capacity which has long been regarded as having an influence on treatment outcome. It is generally seen as a (meta)cognitive construct involving the awareness and understanding of psychological phenomena such as cognitions, emotions, and behaviours of oneself and others (Farber, 1985; Hatcher, Hatcher, Berlin, Okla, & Richards, 1990). Clients high in PM are held to be more observant of the relations between cognitive, affective and behavioural states, and therefore more able to participate in psychotherapeutic

<sup>5</sup> For the purposes of this paper, 'CBT-relevant cognitive capacities' are taken to include intellectual and executive functioning, as well as broader psychological constructs such as abstract reasoning and psychological mindedness.

interventions (Beitel, Ferrer, & Cecero, 2005; Farber, 1985). Indeed, McCallum, Piper, Ogrodniczuk, and Joyce (2003) found a significant relation between PM and outcomes in both short-term group psychotherapy for grief ( $n = 107$ ) and short-term individual psychotherapy for clients with mixed diagnoses ( $n = 144$ ). Similarly, Conte et al. (1990) reported a positive relation between PM and outcome in a sample of 44 adults with affective disorders, although they failed to replicate these results in a later study (Conte, Ratto, & Karusa, 1996).

While these adult-based studies support the notion that clients high in PM respond better to treatment than less psychologically minded clients, there has been very little systematic exploration of PM in relation to CBT with young people. This is despite the fact that PM may be particularly relevant to engagement in CBT, given that CBT encourages the monitoring, evaluation and expression of cognitions, emotions, and behaviours (Grant, 2001). In the one study to date, Boylan (2006) compared CBT for depression in adolescents ( $n = 37$ ) with Systemic-Behavioural Family Therapy ( $n = 35$ ) and Non-Specific Treatment ( $n = 35$ ). Levels of PM were not found to be predictive of post-treatment functioning (e.g., depression as measured by the Beck Depression Inventory). At the same time, clients with high PM showed a more rapid improvement in the CBT condition in comparison to those treated with Systemic-Behavioural Family Therapy.

Valid and reliable measures may allow for further exploration of the relationship between cognitive capacities such as PM and CBT outcomes with children and adolescents. Until recently, measures of PM and related constructs (e.g., self-consciousness) were not without problems. In particular, there had been a tendency for measures of PM to tap into maladaptive cognition such as rumination (Kingree & Ruback, 1996). For example, items of the Private Self-Consciousness Scale (PrSCS; Fenigstein, Scheier, & Buss, 1975) have been shown to correlate significantly with measures of depressive psychopathology, and these items may therefore fail to accurately capture the type of PM which is seen to be essential for engagement in CBT (Anderson, Bohon, & Berrigan, 1996).

An alternative framework with which to understand PM and its potential relevance to CBT is encapsulated in the multidimensional model of PM developed by Grant (2001)<sup>6</sup>. Grant positioned PM as a (meta)cognitive construct incorporating both: (1) the capacity to explore cognitive, affective, and behavioural phenomena ('self-reflection'); and (2) an interest in, and understanding of, cognitive, affective, and behavioural phenomena ('insight'). The process by which individuals monitor (i.e., self-reflect) and evaluate (i.e., apply insight to) the impact of cognitive, affective, and behavioural changes is seen to be particularly relevant to the clinical practice of CBT (Grant, 2001). For example, Grant noted that the process of 'self-reflection' is akin to the self-monitoring held to be central to CBT, and suggested that the speed or

extent of a client's response to CBT may be influenced by their level of self-reflection and insight. Further, Grant also suggested that a knowledge of the capacity for self-reflection and insight can be used to guide clinicians' use of cognitive and behavioural techniques.

In order to facilitate tests of this model of PM, Grant, Franklin, and Langford (2002) developed and evaluated the Self-Reflection and Insight Scale (SRIS) for use with adults. The Insight subscale of the SRIS (SRIS-IN) was found to demonstrate good convergent and divergent validity, in that it was negatively associated with measures of psychopathology and positively associated with a measure of cognitive flexibility. The Self-Reflection subscale (SRIS-SR) was positively correlated with a measure of anxiety, which was seen to indicate a possible overlap with rumination. In a more recent study by Roberts and Stark (2008), exploratory and confirmatory factor analyses of the SRIS administered to a sample of medical students ( $n = 462$ ) suggested that three factors best fit the data: two self-reflection subscales (Engagement in Self-Reflection and Need for Self-Reflection) and an Insight subscale. While Grant and colleagues (2002) found no gender effects, Roberts and Stark (2008) reported that males scored higher on the Insight subscale relative to females, and they found a positive correlation between age and Insight. The findings reported by Grant and colleagues (2002) and Roberts and Stark (2008) provide confirmation of both the content and construct validity of the SRIS. Both research teams concluded that further research is needed to explore the predictive validity of the measure. Nonetheless, based on the encouraging findings, Grant and colleagues (2002) concluded that the SRIS can be regarded as an "advance" on other measures of PM, in that it allows for the examination of self-reflection and insight as two distinct components of PM (2002, p. 833).

In summary, self-reflection and insight are two cognitive capacities relevant to the practice of CBT, including the practice of CBT with young people. A major emphasis in the clinical and research literature on CBT with young people is the need to consider the influence of CBT-relevant cognitive capacities on engagement in treatment (Grave & Blissett, 2004; Quakley et al., 2004). In order to facilitate research into the relationship between self-reflection, insight, and the outcomes of CBT with young people, an empirically-tested measure of self-reflection and insight in young people is required. The aim of the current study was to translate and adapt the SRIS for use with a child and adolescent population. Study 1 focused upon the adaptation of the adult measure for use with young people, including piloting to test the comprehensibility of the adapted measure (Self-Reflection and Insight Scale for Youth; SRIS-Y). Study 2 explored the psychometric properties of the SRIS-Y in a community sample, including evaluation of its reliability and structural, convergent, and divergent validity. Based on the findings associated with the adult measure (Grant et al., 2002; Roberts & Stark, 2008), it was expected that the structural, convergent, and divergent validity of the SRIS-Y would be adequate. Age and gender trends in self-reflection and insight were analysed exploratively.

<sup>6</sup> For a diagrammatical representation of the model, see Grant (2001).

## Study 1: Development of the SRIS for a Dutch child and adolescent population

### Method

#### Participants

One hundred and thirty-eight children and adolescents (60 boys and 78 girls), aged 9 to 18 years ( $M = 13.83$  years,  $SD = 2.68$ ) participated in Study 1. These young people were drawn from primary schools ( $n = 58$ ) and secondary schools ( $n = 80$ ) in the region South Holland, the Netherlands. Almost the entire sample was of Dutch origin (94.2%).

#### Procedure

Permission to translate and adapt the SRIS was granted by the original author prior to commencing the study. The English version of the SRIS was translated according to guidelines for the translation of instruments in cross-cultural research (Van Widenfelt, Treffers, de Beurs, Siebelink, & Koudijs, 2005). Items which were seen to contain difficult words (e.g., aware of; reflect) or to have a complex sentence structure were adapted so as to be more suitable for use with children and adolescents. An example of an adapted SRIS-Y item included "I usually notice that I have thoughts" (original: I am usually aware of my thoughts). To further increase the developmental appropriateness of the questionnaire, a practice item was added to allow respondents to gain familiarity with the response format.

The study was carried out with the approval of the Psychology Ethics Committee of the University. Permission to conduct the study was received from school principals, and parental and child consent was obtained. A randomly selected subset of participants ( $n = 34$ ) answered a number of piloting questions following completion of the questionnaire in the classroom in order to assess the comprehensibility of the items. Two questions were posed in relation to each item in the questionnaire: "Did you understand the question?" (yes; a little; not at all), and "Did the item contain any difficult words?" (none were difficult; some were difficult; all were difficult). Participants were also asked: "Did you understand the instructions?" (yes; a little; not at all).

#### Instrument

The Self-Reflection and Insight Scale (SRIS; Grant et al., 2002) is a 20-item self-report instrument which comprises two subscales: Self-Reflection and Insight. The SRIS assesses individuals' propensity to reflect on, and their level of insight into, their thoughts, feelings, and behaviour. Items are answered with a 6-point scale (1 = disagree strongly to 6 = agree strongly). The authors reported that the SRIS is a valid and reliable measure of self-reflection and insight in adults (Cronbach's  $\alpha$  SRIS-SR = .91 and Cronbach's  $\alpha$  SRIS-IN = .87). The test-retest reliability was .77 for the Self-Reflection subscale and .78 for the Insight subscale.

#### Data analysis

Two cases with more than 25% of items missing on the SRIS-Y questionnaire were excluded from analyses. The remaining missing values (17 participants had 1 item missing) were replaced by extrapolated values using the person mean substitution method (Hawthorne & Elliott, 2005). The responses to the piloting questions were examined to determine whether the SRIS-Y items were comprehensible. The internal consistency of the questionnaire was assessed with the Cronbach's alpha statistic (acceptable  $\geq .70$ ; Field, 2005). SRIS-Y items were assessed with respect to means, standard deviations, floor and ceiling effects, the proportion of participants with a missing value on an item, and the skewness and kurtosis of the item response distribution. Items should be restructured or removed if they show extreme skewness and/or kurtosis (i.e., less than -1 or more than 1; Noom, Deković, & Meeus, 2001). In addition, item-total correlations were examined to check for homogeneity of the scale. If items correlate less than .15 with the total test score, it is likely that they do not measure the same construct as the scale and may need restructuring (Field, 2005).

### Results

#### Piloting

T-tests revealed no significant differences on total and subscale scores between the total sample and the final piloting sub-sample (all  $p$ 's  $> .15$ ). Analyses of the piloting data revealed that 85.6% of the participants did not find any of the words in the items of the SRIS-Y to be 'difficult'. Of the respondents reporting difficulties, the words 'reflect' (Item 16), 'evaluate' (Item 5), 'analyse' (Item 2), and 'self-reflection' (Item 8) were most often cited. Relative to the older participants (14-18 years), the younger participants (9-13 years) rated the items of the questionnaire as more difficult to comprehend,  $t(31.61) = 2.06$ ,  $p = .05$ , and had more trouble understanding the instructions,  $t(29.94) = 2.22$ ,  $p = .03$ .

#### Internal validity and item analysis

The Cronbach's  $\alpha$  for the whole questionnaire was .60. Item response statistics and item-total correlations are displayed in Table 1. For all but one item (Item 13), there was a low rate of non-response, indicating good comprehensibility of the questionnaire. There was a broad range of responses for the SRIS-Y items, with low rates of floor and ceiling effects. The majority of items (16 out of 20) demonstrated acceptable skewness and kurtosis, and 14 items correlated adequately with the total score.

**Table 1.**  
*Item Response Statistics of the SRIS-Y, n = 138*

	<i>M</i>	<i>SD</i>	Mis.	Skw	Krt	Min/Max	CITC	Alpha if item deleted
1. I don't often think about my thoughts	2.70	1.35	0.69	.57	-.34	21.00/4.30	-.07	.63
2. I'm not really interested in analyzing my behaviour	2.89	1.35	0.00	.38	-.92	14.50/1.40	-.21	.65
3. I'm usually aware of my thoughts	3.86	1.49	0.00	-.23	-1.04	0.70/14.50	.01	.62
4. I'm often confused about how I really feel about things	3.14	1.49	0.69	.23	-1.04	13.80/6.50	.37	.57
5. It's important to me to evaluate the things I do	3.99	1.26	1.38	-.67	.04	5.80/8.00	.23	.59
6. I usually have a very clear idea about why I have behaved in a certain way	4.44	1.17	0.00	-.73	.16	1.40/16.70	.14	.60
7. I find it really interesting to examine what I think about	3.88	1.53	0.00	-.42	-.80	10.00/14.50	.40	.56
8. I rarely spend time 'self-reflecting'	3.59	1.43	0.00	-.12	-.86	8.70/8.70	-.20	.65
9. I often notice that I'm feeling something, but often I don't know what exactly I'm feeling	3.40	1.49	0.00	.04	-.92	11.60/10.10	.26	.58
10. I often examine my feelings	3.10	1.43	0.00	.09	-1.04	15.90/3.60	.44	.56
11. My behaviour often puzzles me	2.46	1.25	0.00	.80	-.22	21.70/0.70	.36	.57
12. It's important for me to try to understand what my feelings mean	4.29	1.25	1.38	-.79	.23	3.60/13.80	.47	.56
13. I don't really think about why I behave in the way that I behave	3.11	1.36	4.35	.14	-1.09	10.90/2.20	-.01	.62
14. Thinking about my thoughts makes me more confused	2.86	1.36	0.00	.45	-.92	13.80/2.20	.10	.61
15. I have a definite need to understand how my mind works	3.63	1.37	0.00	-.23	-.77	7.20/7.20	.54	.54
16. I often take time to reflect on my thoughts	3.31	1.49	0.69	.12	-.98	12.30/8.00	.43	.56
17. I often find it difficult to really understand how I feel about things	3.08	1.30	1.38	.36	-.62	8.70/4.30	.20	.59
18. It's important for me to be able to understand how my thoughts arise	3.84	1.46	0.00	-.41	-.75	7.20/10.90	.30	.58
19. I often think about how I feel about things	4.25	1.28	1.38	-.87	.05	3.60/10.90	.51	.55
20. I usually know why I feel the way I feel	4.20	1.16	0.00	-.64	-.46	0.70/7.20	-.10	.63

*Note.* SRIS-SR = Self-Reflection subscale; SRIS-IN = Insight subscale. *M* = Mean; *SD* = Standard Deviation; Mis. = Proportion of participants with any item missing on the scale; Skw. = Skewness; Krt. = Kurtosis; Min/Max = % Responses in minimum/maximum response category; CITC = Corrected item-total correlation.

## Discussion

Overall, the majority of the items of the SRIS-Y posed no difficulty for the participants. Younger participants reported more problems than their older counterparts. While the scale had a less than adequate internal consistency (Field, 2005), the item response descriptives derived from Study 1 demonstrated that the SRIS-Y is a psychometrically adequate measure. It was anticipated that adaptations to the items deemed to be problematic would result in better comprehensibility, and enhanced psychometric properties of the SRIS-Y.

## Study 2: Evaluation of the psychometric properties of the SRIS-Y

### Method

#### Participants

The final sample in Study 2 consisted of 215 children and adolescents (102 boys and 113 girls), aged 9 to 17 years ( $M = 13.66$  years,  $SD = 2.23$ ). The participants attended urban and rural schools in the region South Holland, the Netherlands. Most were of Dutch origin (93.5%). The sample included 82 participants from primary school and 133 participants from secondary school.

#### Procedure

Feedback from the Study 1 participants led to the inclusion of a definition of 'self-reflection' in the introduction to the questionnaire. The responses to the piloting questions and the results of the item response analyses in Study 1 led to the restructuring and adaptation of several items in an effort to improve the internal consistency of the questionnaire (Table 2). In addition, the readability of the new questionnaire was assessed according to Dutch reading grade levels (Van den Berg & te Lintelo, 1977) and was found to be suitable for young people from Grade 6 and older.

**Table 2.**  
*Adaptations to Items Based on the Results of Study 1.*

	Adaptations to Items
Item 2 (R)	'Analyze' replaced with simpler alternative (i.e., 'study')
Item 3	'Aware of' replaced with simpler alternative (i.e., 'notice')
Item 4 (R)	Word order of item adapted to allow Dutch translation to best reflect meaning of item
Item 5	'Evaluate' replaced with simpler alternative (i.e., 'weigh up')
Item 6	Word order adapted to allow for better comprehension
Item 13 (R)	Word order adapted to allow for better comprehension
Item 15	As there is no Dutch equivalent for the concept 'mind', an extended explanation was added to the item
Item 16	'Reflect on' replaced with simpler alternative (i.e., 'think back on')

*Note.* All items with *r* are reverse scored. Items 1, 10, 14 and 20 were not restructured for reasons concerning the content of the item.

Study 2 was carried out with the approval of the Psychology Ethics Committee of the University. Permission to conduct the study was received from school principals, and parental and child consent was obtained. The participants completed the questionnaire package in their classroom.

### Instruments

To explore the convergent validity of the final version of the SRIS-Y, two additional measures of CBT-relevant cognitive capacities were administered. The first capacity, abstract reasoning, was assessed via the *Shipley Institute of Living Scale – Abstraction Subscale* (SILS; Shipley, 1940; Dutch translation and adaptation by Schmand & Smeding, 2000). The SILS consists of 20 incomplete sequences of numbers, letters, or words which are completed by the participants. Good test-retest reliability, validity, and internal consistency have been reported in research using the SILS. In the current study, the Cronbach's  $\alpha$  for the SILS was good ( $\alpha = .80$ ). The second capacity, cognitive flexibility, was assessed via the *Cognitive Flexibility Scale* (CFS; Martin & Rubin, 1995). The CFS assesses an individual's flexibility in thinking, decision-making, and problem-solving on a five-point Likert scale (1 = strongly disagree to 6 = strongly agree). The authors of the instrument reported good internal consistency (.76), test-retest reliability (.83), and construct and concurrent validity. In the current study a shortened version was used so that the entire test battery could be completed during one school lesson. Six items of the CFS which were seen to be most relevant to cognitive development (i.e., they addressed thinking and problem-solving) were translated and adapted for use with Dutch children and adolescents (Sauter & Heyne, 2007). In the current study, the Cronbach's  $\alpha$  for the six items of the CFS was .48.

To explore the divergent validity of the SRIS-Y, the *Strengths and Difficulties Questionnaire* (SDQ; Goodman, 1997; Dutch translation and adaptation by Van Widenfelt, Goedhart, Treffers, & Goodman, 2003) was administered. The SDQ is a 25-item questionnaire that assesses the psychosocial adjustment of children and adolescents. For the purposes of this study, the 5-item Emotional Symptoms subscale was used as an index of internalizing problems. Previous studies using the SDQ have reported adequate psychometric properties (Van Widenfelt et al., 2003). In the current study, the Cronbach's  $\alpha$  for the Emotional Symptoms subscale of the SDQ was satisfactory ( $\alpha = .77$ ).

### Data analysis

Prior to data analysis, five cases with more than 25% of the items of a measure missing were excluded from the data set. Two further cases with more than 10 items missing across all questionnaires were excluded, resulting in a final sample of 215 cases. For cases with  $\leq 3$  items missing on the questionnaires (SRIS,  $n = 18$ ; CFS,  $n = 6$ ; SDQ,  $n = 19$ ), values to replace missing values were extrapolated using the person mean substitution method (Hawthorne & Elliott, 2005). Because the SRIS-Y was an adult measure adapted for use with a child and adolescent population, exploratory

factor analysis was deemed the most suitable method of assessing its structural validity. The Kaiser-Meyer-Olkin measure and Bartlett's Test of Sphericity were calculated to examine the suitability of the data for conducting a principal component analysis with varimax rotation. The scree-plot was used to determine how many components to retain (Stevens, 2002). Internal consistency was assessed with the Cronbach's alpha statistic for the total scale as well as for the resulting factors. Subscale-total correlations and inter-subscale correlations were calculated, as well as the skewness and kurtosis of the items. Convergent and divergent validity was examined using correlation coefficients between scores on the SRIS-Y and measures of CBT-relevant cognitive capacities (i.e., the CFS and SILS), and scores on the SDQ respectively. Age trends and gender-related trends in the data were explored using t-tests and correlations. For the age-related analyses, the sample was divided into two groups, namely childhood to early adolescence (8-13 years;  $n = 110$ ) and mid- to late adolescence (14-18 years;  $n = 105$ ).

### Results

Due to time limitations, a number of participants did not complete all measures included in the package ( $n = 93$ ). T-tests revealed no significant differences on questionnaire scores between the group of participants which completed all measures, and those who did not (all  $p$ 's  $> .12$ ). Therefore, cases were excluded pairwise to allow for the maximum number of respondents in the analyses. The number of cases in each analysis is presented in Table 4.

**Table 3.**  
Factor Loadings and Cronbach's Alphas for the SRIS-Y Subscales ( $n = 215$ )

Items	Factor Loadings	
	F1	F2
I often examine my feelings	.74	-.19
I often think about how I feel about things	.69	-.01
I find it really interesting to examine what I think about	.69	-.02
I often take time to think back on my thoughts	.66	-.04
I have a definite need to understand how my mind works	.64	-.28
I'm not really interested in studying my behaviour	.62	.00
I rarely spend time 'self-reflecting'	.60	.10
It's important for me to try to understand what my feelings mean	.60	-.21
I don't often think about my thoughts	.59	.23
It's important for me to be able to understand how my thoughts arise	.55	-.24
I don't really think about why I behave in the way that I do	.46	.23
I'm often confused about how I really feel about something	-.13	.71
I often find it difficult to really understand how I feel about things	-.19	.69
I often notice that I'm feeling something, but I often don't know what exactly I'm feeling	-.08	.68
My behaviour often puzzles me	-.13	.66
I usually know why I feel the way I feel	.12	.58
Thinking about my thoughts makes me more confused	.25	.57
	$\alpha = .84$	$\alpha = .77$

Note. All items with R are reverse scored. Factor loadings above .40 appear in bold.

### Principal component analysis

The Kaiser-Meyer-Olkin measure (.86) and Bartlett's Test  $\chi^2(190, n = 215) = 1071.24$ ,  $p < .01$  confirmed that the data were suitable for conducting a principal component analysis (PCA). Four factors were found with eigenvalues greater than 1, but inspection of the scree plot revealed two factors above the point of inflexion. These two factors accounted for 39.3% of the total variance. After varimax rotation, factor loadings were all greater than or equal to 0.40, with the exception of two items (Items 5 and 6). The two factors reflected constructs similar to the Self-Reflection and Insight factors reported in the Grant et al. (2002) study. The first factor included all twelve of the items from the original Self-Reflection subscale. The second factor comprised seven of the eight items from the original Insight subscale. Item 3 from the Insight subscale loaded on the first factor, rather than on the second factor.

After removing Item 3 and the two items with a factor loading  $< .40$ , a second principal component analysis with varimax rotation was conducted. The results of the analysis are shown in Table 3. This time, the two factors accounted for 43.1% of the total variance, and the factors were in keeping with the subscales of the original questionnaire. The alpha for the whole scale was .77. The alphas for the subscales are presented in Table 3. Separate factor analyses were also carried out with the two age groups (8-13 years and 14-18 years) to verify the consistency of the factor structure. Each analysis yielded a two factor solution in which the Self-Reflection and Insight subscales comprised exactly the same items as found for the group as a whole.

Examination of the skewness and kurtosis of the 17 items revealed two items with slightly elevated negative kurtosis (Item 16 kurtosis = -1.07; Item 9 kurtosis = -1.06). It was decided to retain these items since these were regarded as essential to the scale. Correlations between the SRIS-Y total score and each of the factors yielded the following: Self-Reflection ( $r = .82$ ,  $p < .01$ ), and Insight ( $r = .48$ ,  $p < .01$ ). There was a non-significant negative correlation between the Self-Reflection and the Insight factors.

### Convergent and divergent validity

To investigate convergent validity, scores on the SRIS-Y subscales were correlated with scores on the CFS and SILS (Table 4). As expected, scores on the Self-Reflection subscale and the Insight subscale correlated moderately and significantly with scores on the CFS. No significant associations were found between scores on the SRIS-Y subscales and the SILS. With respect to divergent validity, scores on the Self-Reflection subscale were positively correlated with scores on the Emotional Symptoms subscale of the SDQ (Table 4). The Insight subscale and the Emotional Symptoms subscale were negatively correlated.

### Gender and age trends in self-reflection and insight

On average, girls scored higher on the Self-Reflection subscale relative to boys,

$t(213) = -2.79$ ,  $p < .01$ . There were no significant gender differences on the Insight subscale. No age effects were found when younger (8-13 years) and older (14-18 years) participants' subscale scores were compared in a t-test. Closer inspection within the two age groups revealed a weak but significant correlation between age and Self-Reflection subscale scores in the 14-18 year age group ( $r = .31$ ,  $p < .01$ ,  $n = 105$ ).

**Table 4.**  
Correlations between SRIS-Y Subscales, Measures of Cognitive Capacities and an Index of Internalizing Problems

	CFS	SILS	SDQ Emotional Symptoms
SRIS-SR	.34**	.05	.19**
SRIS-IN	.27**	-.12	-.51**

Note: SRIS-SR = Self-Reflection subscale; SRIS-IN = Insight subscale; CFS = Cognitive Flexibility Scale ( $n = 215$ ); SILS = Shipley Institute of Living Scale - Abstraction Subscale ( $n = 119$ ); SDQ = Strengths and Difficulties Questionnaire ( $n = 205$ ).

\*\* Correlation is significant at the 0.01 level (2-tailed).

### Discussion

An initial exploratory factor analysis identified three poorly functioning SRIS-Y items. One of these items (Item 3: 'I usually notice my thoughts') was also found to be a problematic item in the studies by Grant et al. (2002) and Roberts and Stark (2008). The three items were removed and a second PCA was conducted. Unlike Roberts and Stark (2008), who found that a three factor solution was the best fit, we found two factors which mirrored the Self-Reflection and Insight subscales of the adult SRIS (Grant et al., 2002). There was a non-significant negative correlation between the two factors, echoing the results of the study by Grant and colleagues (2002). The internal consistency of the SRIS-Y in Study 2 was considerably higher than in Study 1, and was comparable to the adult SRIS (Grant et al., 2002), and to other measures of psychological mindedness for adolescents (e.g., Boylan, 2006).

The convergent validity of the SRIS-Y was supported by the associations with items from a measure of cognitive flexibility (CFS), also used in Grant and colleagues' (2002) evaluation of convergent validity. As Grant and colleagues (2002) found that only Insight scores correlated positively with CFS scores, the findings of the current study may reflect either the exclusion of a number of the CFS items in the current study, or the application of the measure with a younger, Dutch population. Contrary to expectations, there was no relationship between scores on the Insight subscale and a measure of abstract reasoning (SILS), which may indicate that these are non-overlapping cognitive capacities. This interpretation was also noted in a study by Hatcher and colleagues (1990), who reported complex patterns of correlations between scores on measures of abstract reasoning and psychological mindfulness.

Study 2 provided support for the divergent validity of the SRIS-Y. Mirroring the results of Grant et al. (2002), a negative correlation was found between the Insight



subscale and an index of internalizing problems. This suggests that the Insight subscale may indeed be measuring psychologically adaptive self-awareness. Similar results have been reported in adult populations using related measures of insight (e.g., the Internal State Awareness subscale of the PrSCS; Kingree & Ruback, 1996). As in Grant and colleague's (2002) study, a positive association was found between the Self-Reflection subscale and an index of internalizing problems. While the aim of the SRIS was to measure constructive rather than dysfunctional self-reflection, it seems that the Self-Reflection subscale may measure a ruminative self-focus, which is associated with emotional symptoms both in adults and in young people.

Girls scored significantly higher than boys on the Self-Reflection subscale. Although this finding contrasts with the results of Grant et al. (2002) and Roberts and Stark (2008), it is in line with studies into various PM-related constructs in adults, which report that females are generally more open to introspection (e.g., Csank & Conway, 2004). The presence of gender differences in rumination from as early as 12 years of age (Jose & Brown, 2008) may also contribute to the relationship between gender and the Self-Reflection subscale found in the current study.

Age-related trends in self-reflection were only found in young people aged 14 to 18 years. These results seem to indicate that the development of self-reflection skills may intensify in mid- to late adolescence, rather than there being a linear progression in skill development. This is in contrast to the findings of research into the related construct of PM, which suggest that PM continues to develop throughout adolescence (Hatcher et al., 1990). The lack of age effects on the Insight subscale may reflect the notion that insight is an individual disposition, rather than a capacity which ripens over time. Indeed, the development of insight may be unrelated to the development of self-reflection.

## General discussion

The results of the present study suggest that the SRIS-Y, a measure of self-reflection and insight adapted for use with children and adolescents, is applicable with young people and is psychometrically adequate. Study 1 involved the adaptation of the adult SRIS to make it suitable for a younger age group. Overall, the items of the SRIS-Y were understandable for the participants. Younger children in the sample had more problems with the measure than older participants. Use of the SRIS-Y may therefore be most appropriate with adolescents and older children. With younger children, interactive and concrete tasks aimed at measuring self-reflection and insight may be more suitable than pen-and-paper measures. A potential lead for the development of such tasks is found in the 'thought/feeling/behaviour card sort task' which is aimed at assessing another CBT-relevant capacity, namely distinguishing between thoughts, feelings, and behaviours (Quakley et al., 2004).

Following modifications suggested by Study 1, Study 2 reported on the factor structure, internal consistency, and validity of the SRIS-Y. In addition, gender

and age trends in SRIS-Y scores were also explored. Similar to the results of the factor analysis reported by Grant et al. (2002), the SRIS-Y was found to comprise two non-correlated and internally consistent subscales measuring self-reflection and insight. Support for the convergent validity of the SRIS-Y subscales was evidenced by associations with a measure of a CBT-relevant cognitive capacity, corresponding with findings from the evaluation of the adult SRIS (Grant et al., 2002). Divergent validity was demonstrated for the Insight subscale, but not for the Self-Reflection subscale. Rather than using the whole SRIS-Y as a measure of 'adaptive' self-reflection, the Insight subscale may provide the best estimate of the type of cognitive capacities most relevant to participation in CBT.

The findings of the current study are promising with respect to the administration of the SRIS-Y with children and adolescents, but several limitations warrant consideration. In terms of the sample, the majority of the participants were of Dutch origin, and therefore the reliability and validity of the SRIS-Y when applied in more diverse populations or in other cultures and countries requires investigation. Second, the generalizability of the findings to a clinical sample is uncertain, given that the current study made use of a community sample of young people with low levels of self-reported psychopathological symptoms. Third, the deletion of several items following the exploratory factor analysis may have influenced the content validity of the measure, calling for further examination of the structural and convergent validity of the 17-item version of the SRIS-Y.

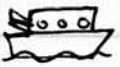
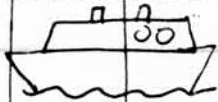
The results of the present research have both research and clinical implications. Following the work of Roberts and Stark (2008), confirmatory factor analyses can be conducted to clarify whether a two or three factor structure best fits data gathered via the SRIS-Y. Further, convergent validity can be re-assessed using other measures of PM and, given the low Cronbach's alpha's in the current study, the full version of the CFS. Finally, research should investigate the relationship between self-reflection, insight, and measures of rumination, given that the current study provides evidence for a link between the Self-Reflection subscale and internalizing problems. Researchers can begin to assess the predictive validity of self-reflection and insight in young people, relative to other possible predictors of treatment response, in order to better understand the mediating or moderating role that such cognitive capacities may have during treatment. For clinicians, client responses to the SRIS-Y may provide an indication of the extent to which the young person is able to engage in behavioural and cognitive therapeutic interventions such as CBT. Clinicians may choose to adapt the delivery or timing of cognitive therapeutic interventions based on their knowledge of available self-reflection and insight skills. For example, young people with low levels of self-reflection and insight may benefit from additional emphasis in treatment on training in self-monitoring of thoughts, feelings, and behaviours (Sauter et al., 2009).

In conclusion, the findings of Study 1 and Study 2 support the use of the

SRIS-Y as a psychometrically sound and developmentally-appropriate measure of cognitive capacities in young people. This measure provides a much-needed means to facilitate the exploration of self-reflection and insight in children and adolescents by researchers and CBT clinicians. The administration of the SRIS-Y in both research and clinical contexts can allow for developmentally-informed treatment delivery with the aim of enhancing the efficiency and effectiveness of cognitive-behavioural interventions.



III

	A	B	C	D	E	F	G	H	i	j
1	X									
2					X	X			X	
3						X				
4		X								
5									X	
6				X						
7										

## Chapter 4

### Developmentally-Appropriate Cognitive-Behavioural Therapy for Adolescent School Refusal: A Case Study



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Manuscript submitted for publication

## Abstract

The '@school project' is a developmentally-appropriate cognitive-behavioural therapy for anxiety-based school refusal in adolescence (Heyne, Sauter, & Van Hout, 2008). This paper illustrates the application of this intervention with a 16-year-old female, her mother, and her homeroom teacher. Family communication skills, family problem-solving, and cognitive and behavioural therapeutic techniques for managing anxiety and depression were used to address key etiological factors which are common in anxious adolescents who refuse to attend school (i.e., parent-adolescent conflicts; concurrent depressive symptoms). Results of this case study suggest that the '@school project' was associated with increased school attendance and reduced anxious and depressive symptoms. Clinically significant treatment gains were maintained at two month follow-up. Factors influencing treatment outcome are discussed and suggestions are offered for treatment-related research with adolescents.

## Introduction

School refusal is characterized by a young person's reluctance or refusal to attend school due to internalizing problems such as fear and anxiety (Berg, 2002; Heyne & King, 2004). The short- and long-term consequences of school refusal on social-emotional, academic, and family functioning can be extremely impairing (McShane, Walter, & Rey, 2004); therefore, it is important to treat school refusal efficiently and effectively. Cognitive-behavioural therapy (CBT) is regarded as the preferred intervention for school-refusing young people (King, Ollendick, & Tonge, 1995; King, Heyne, & Ollendick, 2005), with demonstrated reductions in complaints at post-treatment and follow-up (Heyne et al., 2002; King et al., 2001).

Adolescents appear to be less responsive to currently available versions of CBT for school refusal than children (Heyne, 1999; Last, Hansen, & Franco, 1998). Several factors may account for this inferior treatment response. First, school refusal during the adolescent years is often severe, with greater levels of absenteeism being reported among school-refusing adolescents relative to younger children (Hansen, Sanders, Massaro, & Last, 1998). Second, the clinical presentation associated with adolescent school refusal is complex. Just as adolescents with anxiety disorders often present with additional anxiety and mood disorders (Ollendick, Jarrett, Grills-Taquechel, Hovey, & Wolff, 2008), so too do anxious adolescents refusing to attend school (McShane, Walter, & Rey, 2001).

Numerous developmental factors associated with adolescence may influence the therapeutic process and outcomes associated with CBT (Sauter, Heyne, & Westenberg, 2009). For example, school-refusing adolescents striving for autonomy frequently want to decide for themselves 'when and how' they return to regular school attendance, with plans for school return becoming a source of family conflict and tension (Berg & Collins, 1974; Rubenstein & Hastings, 1980). Further, while some adolescents have acquired cognitive capacities necessary to benefit from cognitive therapeutic techniques in CBT, there are large interindividual differences among adolescents in their levels of cognitive development (Schrodt & Fitzgerald, 1987). Specific cognitive techniques may therefore be helpful for some school-refusing adolescents but not others.

When treating school-refusing adolescents, it is important that a range of adolescent developmental factors be considered when designing and delivering CBT. Examples of 'developmentally-appropriate' treatments for adolescents with anxiety disorders have begun to emerge (see Siqueland, Rynn, & Diamond, 2005); however, until recently, no such 'developmentally-appropriate' CBT interventions have been developed for adolescents who refuse school. Based on a review of the literature, Heyne and colleagues (2008) adapted an existing practitioner guide to CBT for school-refusing children and adolescents (Heyne & Rollings, 2002) to better account for adolescent developmental issues. The resulting treatment, the '@school project' (Heyne et al., 2008), has recently been evaluated in a clinical trial (Sauter,

Heyne, Westenberg, Van Widenfelt, & Vermeiren, 2010). In this paper, we describe the '@school project' for adolescent school refusal and report on a case study which illustrates a number of developmentally-appropriate treatment elements relevant to working with this challenging group of youngsters.

### The '@school project' for school refusal in adolescence

The major aims of the '@school project' are to reduce emotional distress in the adolescent and to help him or her return to regular school attendance. This is achieved via individual CBT with the adolescent and his or her parents, along with consultation to school staff. The treatment manual comprises compulsory 'modules' and optional 'modules' for the adolescent, parents, and school staff (Table 1). Thus, several modules are conducted in a similar way with all clients (e.g., 'Considering the Case Formulation'; 'Understanding School Refusal / Anxiety / CBT'; 'Understanding Teenage Transitions'; 'Setting Goals'; and 'Promoting Progress'). However, the selection, dosage, and sequencing of other modules is unique to each client. In order to select, dose, and sequence treatment modules, clinicians are asked to develop an individualized treatment plan, based on a developmentally-appropriate case formulation. The case formulation is derived from the clinicians' integration of quantitative and qualitative assessment information, and describes the predisposing, precipitating, perpetuating, and protective factors hypothesized to be associated with the school refusal (Heyne & King, 2004). The case conceptualization can be modified as new information is obtained; hence, in turn, the treatment plan (e.g., discontinuation/inclusion of a module; greater/lesser emphasis upon a module) can be adjusted throughout treatment.

The adolescent component of the '@school project' contains several treatment modules which are specifically relevant to working with adolescent school refusers, and several modules which were adapted to account for specific developmental capacities and needs of adolescents. For example, the optional module 'Dealing with Depression' was included in the '@school project' given that many school-refusing adolescents suffer from depressive symptoms (McShane et al., 2001), and that such symptoms can influence and complicate intervention (Bernstein et al., 2000). When the module is included in treatment with the adolescent, parents also receive psychoeducation about depression and they are helped to apply behaviour management strategies to the additional area of managing depression. The 'Dealing with Cognition' module was adapted for the adolescent age group, in that it encourages the clinician to informally assess the level of the adolescent's CBT-relevant cognitive capacities, and to apply this knowledge in the selection, timing, and delivery of cognitive therapeutic techniques. The module incorporates a range of cognitive therapeutic techniques and resources (e.g., self-instructional training as a less cognitively demanding procedure, Ollendick, Grills, & King, 2001; Socratic questioning requiring a higher level of cognitive capacities, Siqueland et al., 2005). All

modules for the adolescent encourage clinician use of developmentally-appropriate language, activities, and materials, together with procedures to enhance motivation (e.g., an email to invite the adolescent to attend the first session).

Parents are engaged in the parent component of the '@school project', and can play a more supportive, autonomy-granting role or a more authoritative role, depending on the nature of the problems and the capacities and needs of both the adolescent and the parents (Sauter et al., 2009). Decisions about the nature and extent of parental facilitation of school attendance are made in the context of the 'Facilitating School Attendance' module. In the 'supportive' role, parents may issue gentle prompts for appropriate behaviour, and reinforce such behaviour. In this way, the adolescent is provided with opportunities to show that they can 'do it on their own' without the intensive involvement of parents. If the adolescent continues to refuse to attend school, the parents can be encouraged to employ an 'authoritative' approach, assuming more responsibility for decision-making about the timing and the process of the adolescent's attendance at school, being responsible for escorting the adolescent to school, and using behaviour modification strategies to reduce inappropriate behaviours. The decisions about the nature and extent of parental facilitation of school attendance give direction to the relative emphasis that is placed on the modules containing strategies for managing the antecedents and consequences of behaviour (i.e., the modules 'Giving Effective Instructions' and 'Responding to Behaviour').

Two modules specifically developed for the '@school project' are common to both the adolescent and the parent treatment. In the module 'Understanding Teenage Transitions', the adolescent and the parents are helped to consider the impact that adolescent transitions may have (had) on the presenting problems. This information can inform treatment goals (e.g., through the signalling of additional targets for treatment) and treatment process (e.g., the insights gained may help clinicians apply treatment strategies in ways which are most fitting to the adolescent's developmental level). In addition, the module 'Solving Family Problems' was incorporated in the treatment for both adolescents and parents, due to the role that family conflict may play in adolescent school refusal (e.g., McShane et al., 2001). The module is delivered in several joint sessions in which the parents and adolescent practice skills in effective communication and problem-solving. An important activity included in this module is a family problem-solving discussion around school placement and/or timing of attendance. This activity can allow for the elucidation of the pros and cons associated with a change of school, or yield an attendance plan describing the roles of the adolescent and the parents in increasing attendance.

**Table 1.**  
Module Description and Case-Specific Sequencing and Dosing of Modules in the Case of Allison

Modules for the Adolescent	Session	Modules for Parents	Session
<i>Considering the Case Formulation</i> Presentation and discussion of the case formulation based on assessment data	1	<i>Considering the Case Formulation</i> Presentation and discussion of the case formulation based on assessment data	1
<i>Understanding School Refusal / Anxiety / CBT</i> Psychoeducation about school refusal and anxiety; information about the current treatment	1, 2	<i>Understanding School Refusal / Anxiety / (Depression) / CBT</i> Psychoeducation about school refusal, anxiety (and depression); information about the current treatment	2, 3
<i>Understanding Teenage Transitions</i> Discussion of adolescent transitions and developmental tasks	2, 3, 13, 14, 15	<i>Understanding Teenage Transitions</i> Discussion of adolescent transitions and developmental tasks	2, 3, 13
<i>Setting Goals</i> Setting goals in relation to the treatment program, including eventual return to school	2, 3	<i>Setting Goals</i> Setting goals in relation to the treatment program, including eventual return to school	1, 2
<i>Solving Problems</i> Training and application of problem-solving steps for problems associated with attending school	3, 10, 11, 15	<i>Addressing Maintenance Factors</i> Exploration and management of factors potentially maintaining school refusal (e.g., access to television; household routines)	4, 5, 6
<i>Solving Family Problems</i> Training and application of communication and family problem-solving skills to problems related to school refusal, such as planning the adolescent's return to school	6, 9	<i>Solving Family Problems</i> Training and application of communication and family problem-solving skills to problems related to school refusal, such as planning the adolescent's return to school	7, 10
<i>Managing Stress</i> Discussion of general stress management strategies; optional practice of relaxation techniques which can be used in combination with exposures		<i>Giving Effective Instructions</i> Discussion and practice of effective instruction giving to facilitate the adolescent's compliance in school attendance-related situations	3, 9, 11
<i>Dealing with Cognition</i> Identification, restructuring, and replacement of unhelpful cognition. The module contains a range of techniques and handouts which differ in terms of how cognitively demanding they are.	5, 7, 8, 9, 10, 11, 13, 14, 15	<i>Responding to Behaviour</i> Discussion and practice of behaviour management strategies involving positive and negative reinforcement (e.g., rewards; planned ignoring) for managing youth anxiety (and depression).	2, 3, 8, 9, 11, 12
<i>Enhancing Social Competence (optional)</i> Practice of social skills for 'difficult' social situations in relation to school refusal (e.g., answering questions about absence from school)	13, 14	<i>Helping Build the Young Person's Confidence</i> Discussion of ways in which to stimulate/support exposures to (non) school-related situations (e.g., modelling confidence; prompting)	2
<i>Dealing with Depression (optional)</i> Psychoeducation about depression, planning of pleasurable activities in order to manage depressed mood, and cognitive therapy tailored to depression-related cognition	2, 3, 4, 5	<i>Preparing Parents to Provide Support</i> Identification and modification of unhelpful parental beliefs/attitudes associated with the management of school refusal; optional practice of problem-solving and relaxation techniques	13, 14
<i>Attending School</i> Development and execution of an 'attendance plan' for the resumption of regular school attendance using exposure-based strategies	2, 3, 4, 5, 7, 8, 9, 10, 11, 12,	<i>Facilitating School Attendance</i> Decision-making about the nature of parent facilitation of attendance; integration/use of strategies addressed in previous modules in development and execution of 'attendance plan'	2, 3, 8, 9, 11, 12, 13
<i>Promoting Progress</i> Discussion of strategies to maintain treatment gains and manage lapses and relapses	15, 16, B1, B2	<i>Promoting Progress</i> Discussion of strategies to maintain treatment gains and manage lapses and relapses	15

Note. B1 and B2 refer to booster sessions 1 and 2.

Modules for School Staff	Meeting
<i>Orientation to Intervention</i> Discussion of the case formulation and developmental issues; CBT and the rationale for selected modules; the role of school staff, parents, and the adolescent with respect to the treatment plan	1
<i>Organizational Issues</i> Information about key organizational issues in an adolescent's return to regular school attendance, and preparation of a case-specific plan for addressing school-based issues (e.g., whether/how to advise peers of the adolescent's return)	1
<i>Emotional Issues</i> Decision-making about strategies school staff can use to support the adolescent in dealing with anxiety (and depression) at school (e.g., collaboration between school and the adolescent in developing attendance plans)	1, 2
<i>Behavioural Issues (optional)</i> Decision-making about strategies school staff can use to deal with disruptive behaviours and strategies to reinforce appropriate behaviours	1
<i>Social Issues (optional)</i> Decision-making about strategies school staff can use to address peer-interaction problems (e.g., buddy system; strategies for dealing with bullying)	
<i>Academic Issues (optional)</i> Constructing a (temporary) academic plan that accounts for the length of time the adolescent has been away from school, and their competencies and interests (e.g., temporary exclusion from gym class; increased homework teacher support)	1, 2
<i>Promoting Progress</i> Exploration and decision-making about strategies school staff can use to foster the adaptive behaviour of the adolescent, and to maintain treatment gains and manage lapses and relapses	2

School consultation occurs during two or three school visits and via regular telephone and email contact with school staff. The clinician helps school staff focus on practical issues for the adolescent's school attendance (e.g., academic concessions; social engineering) and upon relevant behaviour management strategies (e.g., responding to somatic complaints and anxious behaviours; reinforcing attendance in adolescent-appropriate ways) which are represented by a number of optional and compulsory modules.

In general, 10 to 16 treatment sessions are conducted with the adolescent and his/her parents. The services of two clinicians are enlisted: one clinician works with the adolescent while another clinician works with the parents. This is done so that the clinician working with the adolescent is more likely to establish a therapeutic relationship and working alliance with the adolescent (Sauter et al., 2009). This 'dual clinician model' also has practical advantages, as it reduces the need for families to make twice as many visits to the '@school project'. In the first half of treatment the adolescent and his/her parents are seen twice a week to address non-attendance issues. In the second half of treatment, treatment sessions are often scheduled once a week to allow for trouble-shooting during the adolescent's efforts to attend school regularly. In the two months following treatment, two optional booster sessions are offered to the adolescent and parents to prevent relapse.

The following case illustrates the '@school project' approach to the treatment of adolescent school refusal. The client and her mother provided permission for de-identified case information to be used and descriptive and clinical data have been altered to protect the anonymity of the family.

## Case study

### Referral and background information

Allison was a 16-year-old female of average intelligence (IQ = 102; WISC-III; Wechsler, 1991) who was enrolled in year 11. She was referred to the '@school project' by her homeroom teacher because she had been missing three to four days of school a week for the last four months. Allison's attendance had been irregular since the first year of high school (Year 8) and had deteriorated further in Years 10 and 11. Allison's frequent non-attendance had caused her to miss several key tests, and therefore she had been required to repeat Year 11. At the time of referral and during the '@school project', Allison lived with her mother and her younger sister. Her parents were divorced when she was two years old, and she and her sister had infrequent contact with their father who lived overseas. In order to support the family, Allison's mother worked fulltime. Out of necessity, Allison assumed responsibility for many domestic duties at home. Allison's mother took part in a telephone screening to clarify the presenting problems and establish the suitability of the '@school project' for the family.

### Presenting problems

Information from the telephone screening indicated that Allison was frequently absent from school due to somatic complaints (e.g., "feeling sick" in the morning). Often the missed days occurred when tests were scheduled. Previous medical examinations had failed to find a somatic cause for the complaints. Allison was somber and lethargic, had withdrawn from usual activities, and spent much time worrying about school grades, family life, and acceptance by peers. Mother indicated that in the last few weeks, she had not made any attempts to get Allison to school on the days Allison felt sick. In the past, she had occasionally brought Allison to school by car, despite Allison's protests that she was not feeling well. This often resulted in arguments between mother and Allison. Allison's mother indicated that she was unsure of what the best approach was to dealing with Allison's refusal to attend school. On the basis of this information, Allison and her mother were invited to participate in an assessment.

### Assessment

The measures used to inform treatment planning and to evaluate treatment progress conformed to the multi-method, multi-informant approach used previously in the evaluation of CBT for school refusal (e.g., Heyne et al., 2002). The three assessment periods consisted of pre-treatment (two weeks immediately prior to treatment; T1), post-treatment (two weeks following the end of treatment; T2), and follow-up (two months following the end of treatment; T3). Allison's mother did not complete all of the assessment measures at follow-up despite requests to do so. Measures at T1 were administered by the clinicians, two psychologists with Master's-level training in clinical/developmental psychology. At T2 and T3, assessments were conducted by Master's-level students blind to treatment progress.

Several assessment measures were obtained. *School attendance* (% half days attended in the two weeks prior to assessment) was based on inspection of school-based attendance registration. The attendance data for the two weeks prior to telephone screening (T0) and during treatment were obtained by the clinicians from Allison, her mother, and school records. *The Anxiety Disorders Interview Schedule for Children* (ADIS-C/P; Silverman & Albano, 1996; Dutch translation and adaptation by Siebelink & Treffers, 2001) possesses good psychometric properties, and yields diagnoses in accordance with the DSM-IV and a Clinician Severity Rating (CSR; 0–8 scale whereby  $\geq 4$  represents a clinically significant diagnosis) (American Psychiatric Association [APA], 1994). Global functioning was rated by the clinicians using the *Global Assessment of Functioning Scale* [GAF] (APA, 1994). The *School Fear Thermometer* (SFT; Heyne & Rollings, 2002) is a visual analogue scale with high reliability and acceptable validity which assesses school-related fear. The child and parent versions of the *Multidimensional Anxiety Scale for Children* (MASC and MASC-P; March, 1997; Dutch translation and adaptation by Utens & Ferdinand, 2000, 2006) and the *Children's Depression Inventory* (CDI; Kovacs, 1992; Dutch translation and adaptation by Braet & Timbremont, 2002) are valid and reliable instruments which were used to assess anxious and depressive symptoms. The well-established *Child Behavior Checklist* (CBCL; Achenbach, 1991a; Dutch translation and adaptation by Verhulst, Van der Ende, & Koot, 1996) was administered to assess internalizing problems from the parent perspective. A self-efficacy questionnaire was also administered to examine perceived ability to manage anxiety-provoking situations associated with school attendance (*Self-Efficacy Questionnaire for School Situations-Dutch version* [SEQ-SS-NL]; Heyne et al., 2007).

At T1, Allison met DSM-IV diagnostic criteria for major depressive disorder (CSR = 6; primary diagnosis) and generalized anxiety disorder (CSR = 5; secondary disorder). In the two weeks prior to assessment, she had attended only one day of school (additional baseline data are presented in Table 2, T1).

### Case formulation

Assessment results, as well as insights into the developmental and maintenance of the school refusal gained throughout the treatment, informed the case formulation (Figure 1). Allison and her mother described Allison as a "perfectionist", who derived much of her self-worth from "performing well" on academic and social fronts. She and her mother reported that since Allison had become a teenager, she was more concerned with "what others thought of her". These characteristics, in addition to the stress in the family due to persistent financial problems, were seen to be factors which potentially *predisposed* Allison to developing school refusal. Although Allison reported having trouble with attending school for several years, a *precipitating* factor for the recently escalated absenteeism seemed to be the increased importance of tests in the second last year of high school. The *perpetuation* of the school refusal

was conceptualized as follows. Faced with the prospect of having to take tests at school, Allison experienced physical symptoms of anxiety and feelings of stress, and negative cognitions related to her performance on tests. The reduction in symptoms she experienced when she at home rather than going to school, negatively reinforced her avoidance of tests. The avoidance gradually generalized to whole school days, as Allison also began to worry about the negative evaluations of her teachers in relation to her academic work and her peers in relation to her absenteeism. Over time Allison began to think that she had “failed” and was “hopeless” because she was away from school so much, which in turn led to a sense of guilt and depressed mood, as well as behavioural and physical symptoms (anhedonia; lethargy). Mother reported that she had attempted to return Allison to school, but became frustrated and discouraged after several unsuccessful attempts, believing her efforts to be futile. Although school staff had referred Allison to the ‘@school project’, they had long ‘turned a blind eye’ to the problem and did not enforce any consequences of her absenteeism. Allison’s anxious and depressive symptoms, the negative reinforcement of Allison’s avoidance resulting from mother’s inconsistent behaviour, and the lack of monitoring by school were all seen to be involved in the of the school refusal. During treatment it also became apparent that mother’s own problems (e.g., financial and work-related issues as well as her sense of loneliness and helplessness) had a negative influence on her current ability to engage in the treatment, and to be emotionally available for Allison. The impact of mother’s own problems on her relationship with Allison, and the resulting parent-child conflicts, were therefore seen to be additional and significant perpetuating factors of the school refusal. Key *protective* factors included: Allison’s willingness to engage in treatment, her good social skills, and her supportive peer network; mother’s emotional bond with Allison; and the willingness of school staff to help with the management of the problem.

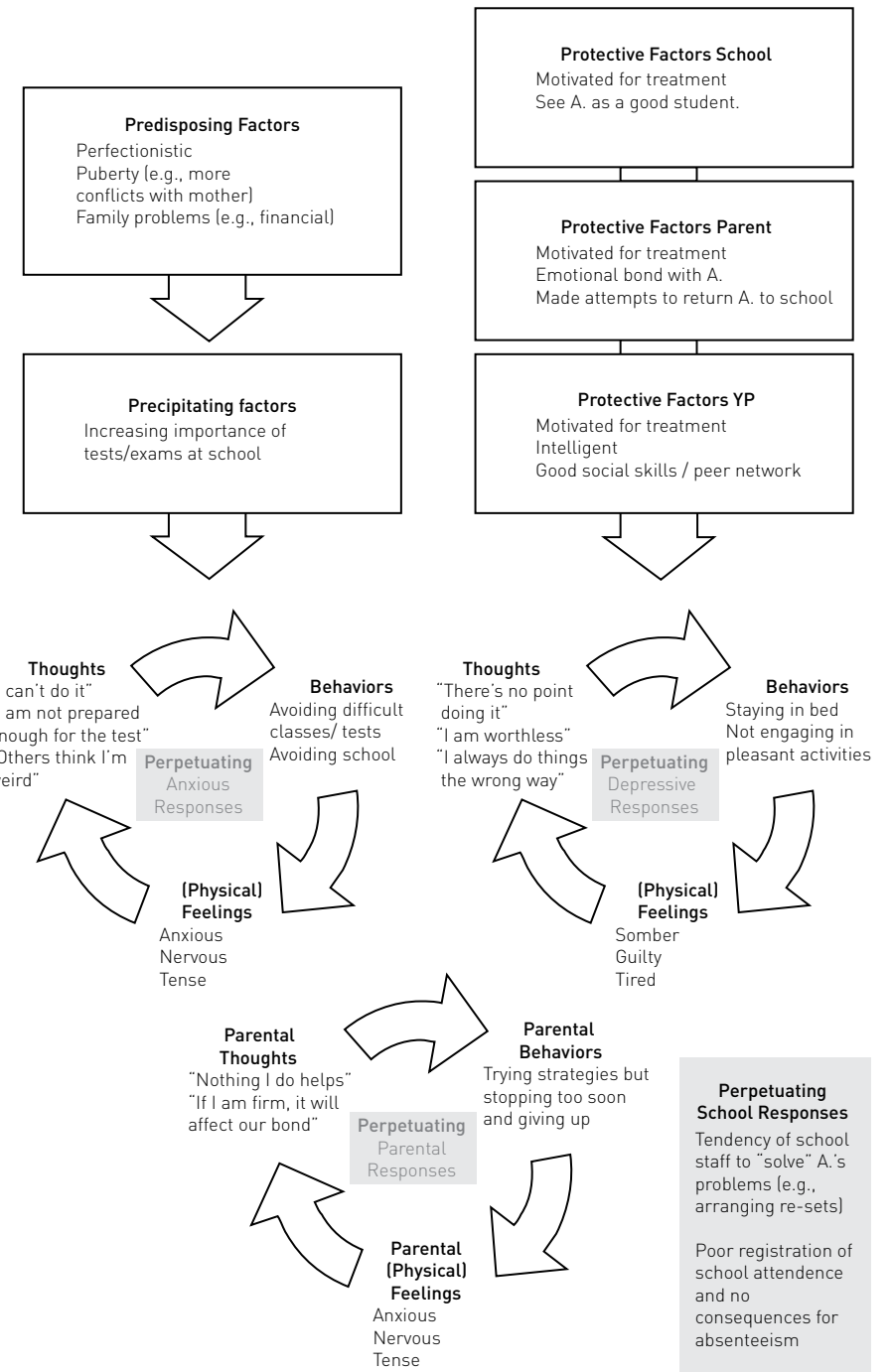


Figure 1. Case Formulation of Predisposing, Precipitating, Protective, and Perpetuating Factors



### Treatment planning

The case formulation informed treatment planning with respect to the selection, dosage, and timing of the modules to be delivered. Allison functioned quite independently, and it was uncertain as to whether mother would be able to facilitate Allison's school attendance. Therefore, the treatment plan emphasized Allison's own decision making about school attendance in the 'Attending School' module (i.e., rather than during the 'Solving Family Problems' module). The 'Dealing with Depression' module was scheduled throughout treatment, given that Allison was diagnosed with depression on the ADIS-C/P (Silverman & Albano, 1996), scored above the clinical cut-off on the CDI (score of 13; Kovacs, 1992), and given that behavioural activation has been demonstrated to be efficacious in the treatment of depression (e.g., Dimidjan et al., 2006). Based on self- and parent-reported somatic complaints during the clinical interviews and the CBCL, and given the effective use of relaxation training in the treatment of school refusal and anxiety (Heyne & Rollings, 2002; Lohaus & Klein-Hessling, 2000), the module 'Stress Management' was incorporated in the initial treatment plan. However, during the 1/3 treatment review (coinciding with session 6), it was decided that it was no longer necessary to deliver this module because Allison was already benefiting from engagement in 'relaxing' activities which arose in the context of the 'Dealing with Depression' module. At the 2/3 review (coinciding with session 10), it was decided that some parts of the optional 'Enhancing Social Competence' module should be applied given that Allison increasingly expressed worries about her peer relations.

It was determined that mother should try to employ more 'authoritative' parenting strategies, in order to more 'firmly' support Allison in her attempts to increase her school attendance. Therefore, the module 'Giving Effective Instructions' and the 'planned ignoring' part of the 'Responding to Behaviour' module were planned in the first half of treatment, given that behaviour modification strategies can be effective in the treatment of anxious young people (Khanna & Kendall, 2009). However, the consistent use of these parenting strategies proved to be difficult for mother. Therefore, after the 2/3 review, the emphasis shifted to the application of more 'supportive' strategies such as positive reinforcement ('Responding to Behaviour'). When, in the second half of treatment, it became apparent that mother's cognitions were negatively influencing her application of key behaviour management strategies, the module 'Preparing Parents to Provide Support' was added to the treatment plan. Two joint sessions based on the module 'Solving Family Problems' were planned, given that mother and Allison had reported that communication problems and conflicts played a central role in the perpetuation of the school refusal, and given the support for the use of family-based work in the treatment of anxious adolescents (Siqueland et al., 2005).

### Course of treatment

Two clinicians were involved in treatment: one worked with Allison and provided consultation with school staff, while the other worked with Allison's mother. In the first half of treatment, Allison and her mother attended two sessions per week. In the second half of treatment, the plan for weekly sessions was disrupted by additional family problems and school vacations. Thus, the treatment was not completed before the end of the school year. It was decided to suspend treatment for six weeks over the school summer holiday period and deliver the remaining six sessions of treatment in the new school year.

### Treatment with Allison

Allison reacted positively to the material covered during the first two sessions (i.e., modules 'Considering the Case Formulation', 'Understanding School Refusal / Anxiety / CBT', and 'Dealing with Depression'). She reported that the visual depiction of her situation (a simplified version of the case formulation presented in Figure 1) accurately reflected her experience of being stuck in the 'vicious circles' of anxiety and depression. Allison's treatment goals were discussed during sessions 2 and 3 ('Setting Goals') and they included: 1) to engage in more fun activities; 2) to start attending school three days a week, each week; 3) to stop avoiding social situations (e.g., going out with friends); and 4) to take tests, even when "I feel like I haven't studied well enough". The 'Understanding Teenage Transitions' module was also addressed during sessions 2 and 3. In particular, the relationship between normal adolescent development and the changes in her relationship with her mother was discussed. Although Allison was very self-sufficient, she sometimes wished that her mother was more authoritative (e.g., that her mother would take responsibility for making household decisions rather than discussing them with her daughters). Allison was helped to accept her mother's parenting style, and encouraged to take on challenges herself without feeling like she needed to rely on her mother and others.

Allison's depressive complaints were attended to using the 'Dealing with Depression' module in sessions 2 to 5, with special focus on helping her achieve her goal of engaging in more fun activities. The module addressed Allison's cognitions around her guilt about engaging in pleasant activities, such as, "If I don't attend school regularly, I don't deserve to do fun things." Allison was also encouraged to monitor her activity levels and mood on a daily basis, rating both her feelings and how pleasant the activities were in which she participated. She was surprised to see how much time she spent in solitary and non-school related activities such as watching TV. As a result of her monitoring, Allison decided that she needed to increase her activity levels and selected a number of 'social' activities (e.g., meeting with friends), 'sensory' activities (e.g., drawing), and 'success' activities (e.g., doing homework).

Concurrently, the 'Attending School' module was initiated. A 'graded attendance plan' was chosen by Allison in session 2 (i.e., attend three school days

in the first week of treatment; attend four school days in the second week; etc.), as she believed it would be easier to build up gradually rather than attend a whole week of school 'in one go'. To further develop the attendance plan, Allison and the clinician spent time in session 3 on a collaborative problem-solving exercise. During this exercise, the clinician and Allison discussed the pros and cons of the available alternatives in order to determine which classes she would attend during the build up to full-time attendance ('Solving Problems').

Even with this tailored attendance plan, Allison's school attendance continued to fluctuate. From sessions 5 to 8, the 'Dealing with Cognition' module was employed together with the 'Attending School' module, to explore the thoughts, feelings, and behaviours associated with situations which seemed to be associated with the continued non-attendance (e.g., arguments between mother and Allison about the household routine). During work with this module, Allison reported feeling angry that her mother never seemed to realize how unhappy she was with the situation at home. Rather than discussing her feelings with her mother, Allison would fret about it the whole night, such that she did not "feel well enough" to attend school the next morning. The clinician observed that Allison was able to identify and express the thoughts, feelings, and behaviours related to this situation with little prompting. Thoughts related to the arguments with her mother included "not going to school is a way of punishing mum" and "that'll teach her". In the process, Allison realized that these thoughts led to negative consequences (e.g., feeling guilty about not going to school and feeling down). Given Allison's level of CBT-relevant cognitive capacities, more cognitively-demanding techniques such as cognitive restructuring were employed. For example, via Socratic dialogues with the clinician, Allison began to challenge the logic of her cognitions (e.g., "Does punishing my mother in the short term *really* help me in the long term?"). In addition, Allison explored the benefits of taking greater responsibility for her school attendance (e.g., school attendance was reframed as something important to her future and her goals, rather than a way of asserting influence over her mother).

In session 9<sup>7</sup>, the arguments between Allison and her mother were also discussed in a joint session focused on family communication skills ('Solving Family Problems'). Both Allison and mother reported that they often had heated arguments about small matters, and that these matters were not resolved. When describing a typical argument, it became clear that Allison and her mother often misunderstood each other due to their style of communication. For example, Allison's mother tended to be lengthy in her explanations, sometimes finding it hard to organize her thoughts. Allison would interrupt her mother or walk away from the conversation if she thought that her mother was "rambling". Mother often felt frustrated when this happened, because she did not have the chance to fully explain her point of view to Allison. Active

<sup>7</sup> Session 10 with mother.

listening was explained and modelled by the clinicians. Allison and her mother were encouraged to practice active listening skills in the session during a re-enactment of their most recent argument, and they were given the home-task of practicing active listening. The home-task was not completed, but both Allison and mother indicated that they now better understood each others' communicative strengths and weaknesses.

Allison's school attendance gradually increased, and by session 9 she attended approximately four days per week (80%). She was confronting increasingly challenging situations with some success (e.g., attending a class with a teacher she did not like), although her tendency to avoid these situations remained. For example, after making up her mind to attend a class, Allison would fail to go for various reasons (e.g., she first wanted to discuss with her homeroom teacher possible "tactics" for dealing with the teacher she disliked). She still occasionally avoided taking tests because she thought she had not studied enough. By exploring these situations in sessions 9 to 10 ('Attending School'), a number of cognitions were identified which were seen to underlie this behaviour (e.g., "I can't do it by myself"; "I'm sure I'm not going to pass because I missed a few questions on the test"). The cognitive restructuring procedures from the 'Dealing with Cognitions' module were used to modify these thoughts. Furthermore, in session 10 Allison was encouraged to apply problem solving skills ('Solving Problems') to identify ways in which she could solve school-related problems (e.g., arranging to take tests she had missed due to her absenteeism), rather than relying on others such as her homeroom teacher to solve these problems for her. Around this time the school head indicated that, due to her absenteeism, Allison had insufficient grades to go on to Year 12. Applying problem-solving skills, Allison weighed up the pros and cons of transferring to an adult education program at a new school (pros: a new start, absence of non-academic subjects such as gym; cons: having to make new friends; a high workload due to the intensive nature of the program<sup>8</sup>).

The treatment resumed after five weeks with session 11, which took place in the last week of the summer vacation, and which focused on preparation for the transition to the new school ('Attending School'; 'Solving Problems'; 'Dealing with Cognitions'). In the next session, Allison reported that she was attending school regularly and voluntarily and that she had made new friends there. She felt that she was coping well with the increased workload, and was less anxious about sitting tests ('Attending School'). In sessions 13 and 14, Allison's concerns about negative evaluation by peers

<sup>8</sup> Adult education programs are commonly utilized by high school students who are unable to re-enroll in their previous school. Students can achieve their high school diploma through a year-long educational track. While students have a similar class schedule to high schools (i.e., 5 days a week) they do not have to participate in non-academic classes (e.g., gym). This flexibility is in line with our regular school consultation procedures (i.e., which aim to lower the hurdle as much as possible, in the short term at least, to make increased school attendance more achievable).

(e.g., “I might say something stupid, and then they’ll think I’m weird and won’t like me anymore”) were normalized within a developmental framework (‘Understanding Teenage Transitions’) and addressed via social skills training (‘Enhancing Social Competence’). Alternative ways of reacting in social situations were modelled and rehearsed, and unhelpful cognitions were discussed and challenged using Socratic dialogues (‘Dealing with Cognition’ module). During the next few sessions, Allison’s reports suggested adequate and spontaneous use of adaptive cognitions in social and school-related situations (“Asking for help is OK, but first I can try doing things by myself”; “I am sure I can solve this problem”). She also reported being more assertive (e.g., arranging a meeting with her new homeroom teacher; going to a careers day by herself). In sessions 15 and 16, and in the two booster sessions, Allison’s plans to move out of home, her desire to have a part time job, her further education, and careers orientation were discussed (‘Understanding Teenage Transitions’; ‘Solving Problems’). In addition, her concerns about ending treatment and her fears of relapse were addressed via the ‘Promoting Progress’ module.

### ***Concurrent treatment with the parent***

During work with Allison’s mother, the clinician took into account the current stressors in the mother’s life (i.e., financial problems) by focusing on a limited number of specific problem areas and aiming for graduated changes in mother’s facilitation of Allison’s school attendance. In the first two sessions, mother identified the following treatment goals: 1) to have more structure in the evening and morning routines related to school; and 2) to increase her monitoring of Allison’s attendance (‘Setting Goals’). Sessions 2 and 3 included psychoeducation about the therapeutic strategy ‘exposure’ (‘Understanding School Refusal / Anxiety / (Depression) / CBT’) and ways in which parents can model confidence in their teenage child (‘Helping Build the Young Person’s Confidence’). The ‘Understanding Teenage Transitions’ module was also discussed during these sessions. The clinician and mother explored the changes in mother’s relationship with Allison during the adolescent period. The clinician also stressed that while adolescents seem to be able to ‘handle’ independence, parental guidance is still needed (e.g., being authoritative at times). In response, mother expressed her own beliefs about parenting adolescents (e.g., “adolescents need freedom to decide for themselves”).

In sessions 2 and 3, the role that mother and Allison would play in facilitating Allison’s attendance was discussed, and the attendance plan that Allison had made was shared with mother at the end of session 3 (‘Facilitating Attendance’). The clinician also supported mother in learning and applying behaviour management strategies for a more ‘authoritative’ facilitation of school attendance (‘Giving Effective Instructions’ and ‘Responding to Behaviour’). Although Allison indicated that she would be able to go to school unescorted, Mother believed that she could play a role in encouraging Allison to get out of bed in the mornings when Allison reportedly ‘felt sick’. Mother

reported feeling torn between worrying that Allison was really ill and not believing Allison’s illness complaints. She often expressed these worries to Allison, which led to long discussions and Allison missing the school bus. The clinician conceptualized mother’s well-intentioned response as a reinforcement of Allison’s avoidance behaviour. The clinician emphasized that parents of school-refusing adolescents may sometimes have to firmly guide their children in ‘facing their fears’, due to the adolescents’ desire to avoid anxiety-provoking situations. Mother was therefore encouraged to systematically ignore Allison’s complaints and attempts to negotiate school attendance. Mother was also helped to give clear instructions rather than instructions which were phrased as questions (“Will you get up please?; “Wouldn’t it be a better idea if you did your homework in your room?”) or were vague (“Please get going”). However, mother reported finding it difficult to be consistent in her use of these strategies, partly due to the stressors in her life at that time.

Because mother’s difficulties in running the household appeared to be related to Allison’s school attendance problems, another focus in sessions four, five, and six was the establishment of a smooth household routine (‘Addressing Maintenance Factors’). Small gains were achieved during treatment (e.g., modification to the evening mealtime routine, and to the morning routine for waking Allison). To further discuss the issue of household routines, Allison and Allison’s clinician joined mother and mother’s clinician in a joint-session on family problem-solving (‘Solving Family Problems’) in session 7<sup>9</sup>. In this module, Allison and her mother were guided through the use of the family problem-solving steps to address the following issue: “we argue a lot about the task division of household chores”. This problem was selected by both mother and Allison as it was a ‘medium difficulty’ problem which they believed needed to be resolved in order to increase Allison’s school attendance. The final ‘plan’ reflected an adolescent-appropriate compromise, in that mother committed to starting the evening meal on time and Allison volunteered to help her by washing the dishes. Allison indicated that she appreciated mother’s honesty in admitting that she found it difficult to juggle full-time work and running the household. Mother’s acknowledgment of the problem seemed to improve the quality of the relationship between the two, and both Allison and mother reported a decrease in arguments following this session.

In sessions 8 to 12, the clinician supported mother in further facilitating Allison’s school attendance, with an emphasis now on ‘supportive’ parenting strategies. Mother was encouraged to monitor Allison’s attendance and at the same time to motivate Allison to take more responsibility for following the attendance plan (‘Facilitating Attendance’; ‘Giving Effective Instructions’). The clinician outlined the importance of positive reinforcement as a way in which to stimulate desirable behaviours (‘Responding to Behaviour’). Mother indicated that she found it difficult to

<sup>9</sup> Session 6 with Allison.

reward desirable behaviours, mainly because she saw giving compliments for small successes as “inappropriate” and “unnecessary”. She also believed that Allison was old enough to do things herself and did not need mother to compliment her efforts. As part of this module, a metaphor was used to illustrate that it is essential to give compliments to anxious adolescents, due to their tendency to focus on the negative and to think in black-and-white terms (e.g., ‘think about yourself using a megaphone when praising an anxious teenage child – that is, do it more strongly and enthusiastically than you otherwise might do’). This technique was modelled by the clinician in session. Despite her doubts about the use of positive reinforcement, mother made efforts to give more compliments to Allison contingent on desirable behaviour in the following weeks.

In sessions 13 and 14 attention was paid to the ways in which Allison’s mother could manage her own stress and emotional distress (i.e., arising from the challenge of effectively managing Allison’s school attendance problems), in order to facilitate Allison’s school attendance (‘Preparing Parents to Provide Support’). Discussion took place around stressors for mother, and the impact of cognitions on parenting behaviour. Mother’s cognitions about parenting (e.g., “If I’m too firm with her, she’ll feel unloved”), Allison’s health (“Maybe she really is sick, and if I send her to school she’ll get worse”), and the adolescent period (“She is old enough to manage her own school attendance”) were explored and challenged using cognitive therapeutic techniques.

In the 15th and final session mother reported that her interactions with Allison were more positive and that the household routines were running more smoothly. Mother indicated that getting up in the morning was still sometimes difficult for Allison. Attention was paid to applying both ‘authoritative’ and ‘supportive’ strategies to facilitate getting up in the morning (e.g., giving effective instructions; giving compliments). Treatment gains were reviewed and the strategies addressed during treatment were discussed in relation to their application to relapse prevention (‘Promoting Progress’). As mother had planned an appointment with a social worker to discuss issues that had arisen during earlier work on the module ‘Addressing Maintenance Factors’ (e.g., household finances), she did not make use of the two booster sessions.

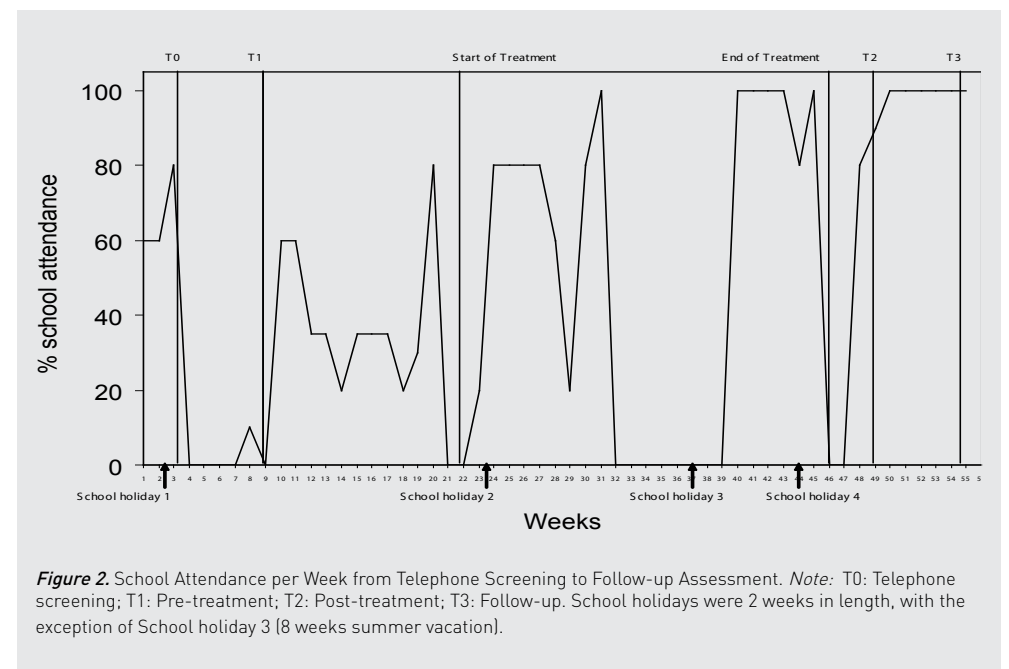
### Consultation with the school

Two consultative meetings with the homeroom teacher from Allison’s school took place early in treatment (around session 2 with Allison) and half-way through treatment (around session 9 with Allison). Prior to commencement of the ‘@school project’ the school inconsistently monitored Allison’s non-attendance, and there was no clear procedure for arranging re-tests for the tests Allison had missed. After providing information about the ‘@school project’ approach to Alison’s school refusal (‘Orientation to Intervention’), the homeroom teacher was asked to routinely

follow up on any absences by contacting Allison or her mother and encouraging Allison’s attendance the next day/class (‘Organizational Issues’). The homeroom teacher suggested that Allison’s unhelpful cognitions about her academic and social functioning presented a greater problem for her than actual intellectual or social skills deficits (‘Emotional Issues’). As part of the ‘Academic Issues’ module, discussion took place around the school’s support of the adjusted class schedule developed by Allison and the clinician. The homeroom teacher was also encouraged to help Allison take responsibility for scheduling her own tests, and to meet with Allison on a weekly basis for an informal ‘chat’, as a developmentally-appropriate reinforcement for Allison’s increased attendance (‘Behavioural Issues’). Furthermore, the homeroom teacher helped Allison consider her further schooling and vocational options given that Allison was not able to stay at her current school and was orienting herself to her future career alternatives (‘Promoting Progress’).

## Evaluating outcome: Post-treatment and follow-up assessments

Data from the pre-treatment (T1), post-treatment (T2), and follow-up (T3) assessments are presented in Table 2, and Allison’s weekly rate of school attendance is shown in Figure 2.



**Figure 2.** School Attendance per Week from Telephone Screening to Follow-up Assessment. *Note:* T0: Telephone screening; T1: Pre-treatment; T2: Post-treatment; T3: Follow-up. School holidays were 2 weeks in length, with the exception of School holiday 3 (8 weeks summer vacation).

**Table 2.**  
Results of Pre-treatment (T1), Post-treatment (T2) and Follow-up (T3) Assessments

Measure/Subscale	T1	T2	% Change T2	T3	% Change T3
Self-report					
Attendance (%)	10	90	88.89	95	89.47
SFT	90	0	100	0	100
MASC	49	27	44.89	23	53.06
CDI	18 <sup>a</sup>	14 <sup>a</sup>	22.22	11	38.89
YSR - Internalizing (T scores)	70 <sup>a</sup>	57	18.57	55	21.43
SEQ-SS-NL	82	100	21.95	93	13.42
Parent-report					
MASC-P	46	28	39.13	c	c
CBCL - Internalizing (T scores)	59	52	11.86	33	44.07
Clinician-report					
GAF	55	70	21.43	80	31.25
CSR (primary diagnosis)	6	0	100	0	100
TRS			High		High

Note: % Change T2: changes between T1 and T2. % Change T3: changes between T1 and T3. Attendance: % attendance in 2 weeks prior to assessment; CBCL: Child Behavior Checklist (Achenbach, 1991a); CDI: Children's Depression Inventory (Kovacs, 1992); CSR: Clinician Severity Rating; ADIS-C/P (Silverman & Albano, 1996); GAF: Global Assessment of Functioning Scale (APA, 1994); MASC: Multidimensional Anxiety Scale for Children (March, 1997); MASC-P: Multidimensional Anxiety Scale for Children - Parent Version (March, 1997); Self-Efficacy Questionnaire for School Situations (SEQ-SS-NL; Heyne et al., 2007); SFT: School Fear Thermometer (Heyne & Rollings, 2002); TRS: Treatment Response Status.

<sup>a</sup> Above the clinical cut-off. <sup>b</sup> Clinical. <sup>c</sup> Questionnaire not returned.

Allison's school attendance increased from 10% at T1 to 90% at T2, and continued to be high at T3 (95%). Allison reported that she had missed one day of school at T2 because she had stayed up all night talking with her sister about 'boy troubles'. She had felt too tired to attend school the next day, despite mother's attempts to get her to go. At T3 Allison reported that she had not missed a day of school since the last assessment, but she had been late to school one morning which explained the 95% rate identified in the school's attendance records.

Allison's GAF score increased from T1 to T3. At T2 and T3 she no longer met criteria for any DSM-IV diagnosis, although some symptoms of Generalized Anxiety Disorder were present at T2. Specifically, Allison reported worrying about interpersonal issues and the possibility of a relapse. At the same time, she was able to deal with these worries by challenging her unhelpful thinking and talking to others. At T3 she reported that her worries were much reduced in intensity and frequency.

Self-report measures of fear (SFT) and anxiety (MASC) and parent-reported anxiety (MASC-P) decreased between T1 and T3. At T1 Allison scored above the clinical cut-off on the measure of depressive symptoms (CDI). At T2 the level of depressive

symptoms experienced by Allison was slightly above the clinical cut-off, but by T3 the level had fallen to within the normal range. Mother's reports of Allison's internalizing problems (CBCL) indicated a decrease from T1 to T2, and a further decrease at T3.

Following Ladouceur et al. (2000), a clinically significant treatment response was defined as a 20 percent reduction in scores after treatment (i.e., between pre-treatment and post-treatment; between pre-treatment and follow-up) on the following treatment outcome measures (SFT; MASC; MASC-P; CDI; CBCL-Internalizing); a 20 percent increase in the following measures (% attendance; SEQ-SS-NL; GAF) after treatment; and a CSR of < 4 on the primary diagnosis on the ADIS-C/P after treatment. The clinical significance of the treatment response was then categorized as 'high' (i.e., criteria reached on 6 or more of the measures), 'moderate' (i.e., criteria reached on 4 of the 9 measures), 'low' (criteria reached on 2 measures) or 'no treatment response' (i.e., criteria reached on none of the measures). Based upon these guidelines, Allison demonstrated high treatment response status at post-treatment. This status was maintained at T3.

## Discussion

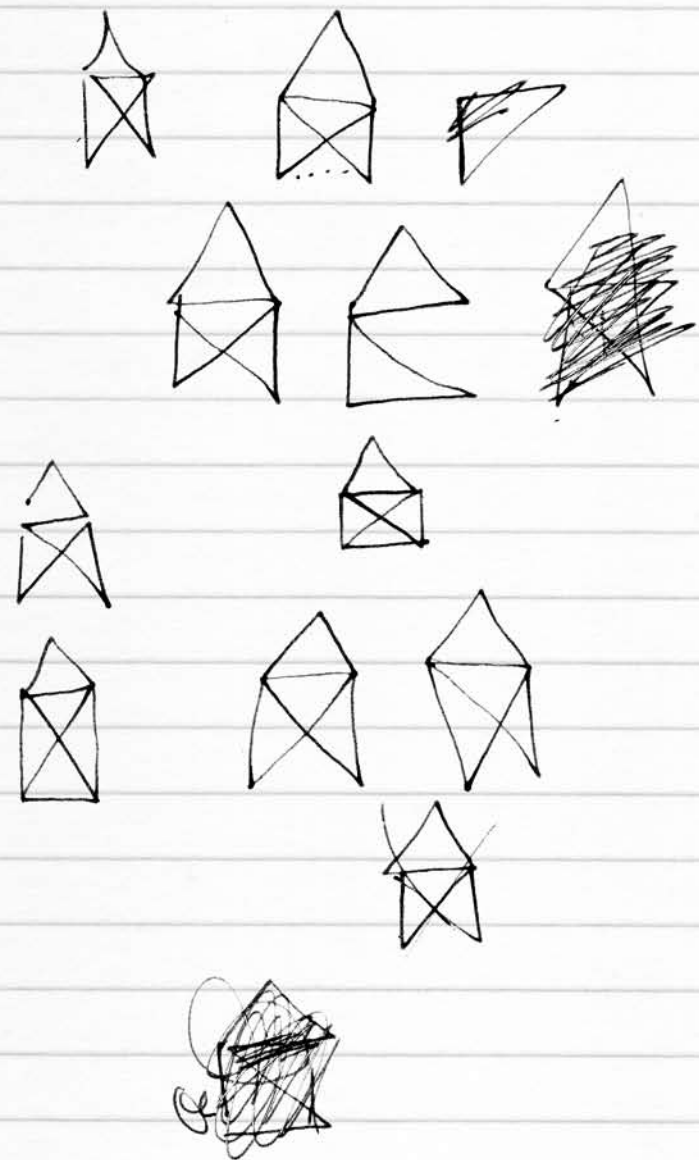
Previous studies reported poorer outcomes for older versus younger school refusers (Heyne, 1999; Last et al., 1998), prompting the development of the '@school project' for adolescent school refusal. The current case study with 16-year-old Allison, her mother, and her homeroom teacher suggests that the '@school project' may be an effective treatment for adolescents. Post-treatment assessment indicated increased school attendance and accompanying reductions in anxious and depressive symptoms. Clinically significant treatment gains were maintained at the two month follow-up. The case of school refusal described in this study is a good example of the etiological complexity associated with school refusal, with a range of individual, family, and school factors seen to be associated with the onset and maintenance of the school attendance problems (Heyne & King, 2004). A number of factors may have influenced treatment outcomes (e.g., mother's personal problems; the treatment being spread across two academic years). At the same time, a number of developmentally-appropriate elements specific to the '@school project' are likely to have contributed to the findings. The modules 'Solving Family Problems' and 'Dealing with Depression' addressed factors common to adolescent school refusal (i.e., parent-adolescent conflicts; concurrent depressive symptoms) and applicable in Allison's situation. Information gathered via application of the 'Understanding Teenage Transitions' module helped focus attention upon developmental tasks and transitions potentially associated with Allison's school refusal. For example, mother's cognitions about her expectations of adolescents and how to parent teenagers were explored and challenged, and Allison was helped to use social skills and cognitive techniques to manage her fears of negative evaluation by peers and her avoidance of social situations. Furthermore, the treatment modules were delivered in a developmentally-appropriate manner (e.g., using therapeutic

resources and strategies relevant to Allison's developmental level).

Optimal engagement of mother in both assessment and treatment was impeded by mother's reactions to the external stressors in her life. Indeed, the high levels of stress reported by mother lead to her referral to social services following treatment. While mother only had a few appointments with the social worker after the '@school project', this extra support may have influenced the effectiveness of the treatment as measured at follow-up. Another limitation of the current study is the uncontrolled single case study design, restricting the generalizability of the findings. Further research with a controlled single case design and randomized clinical trials are needed to draw firmer conclusions about the effectiveness of the '@school project'. In future large-scale studies, it will also be informative to determine the predictive influence of developmental factors such as autonomy and cognitive development on the outcomes of this developmentally-appropriate CBT.

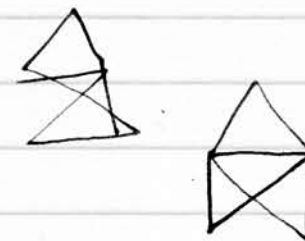
Notwithstanding these limitations, the current case study provides a qualitative and quantitative description of a promising CBT for adolescent school refusal. The case of Allison illustrates how the '@school project' allows for a targeted yet flexible treatment with adolescent school refusers, their parents, and school staff. This treatment keeps adolescent developmental factors in focus in order to best meet the needs of this challenging group of young people.





## Chapter 5

Developmentally-Appropriate Cognitive-Behavioural  
Therapy for Adolescent School Refusal: A Preliminary  
Evaluation of Efficacy and Acceptability



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## Abstract

The objective of the current study was to evaluate the efficacy and acceptability of a developmentally-appropriate cognitive-behavioural treatment (CBT) for anxiety-based school refusal in adolescence, and to examine the influence of developmental factors (i.e., cognitive capacities; autonomy; clinician developmental appropriateness) on treatment outcome. Twenty adolescents (mean age = 14.6 years) and their parents participated in an open trial of the treatment. Outcome was assessed at post-treatment and two-month follow-up via attendance records, self-report, parent-report, and clinician ratings. Treated adolescents showed statistically and clinically significant improvements in school attendance, emotional symptoms, and self-efficacy, with medium to large effect sizes on average. All gains were maintained at follow-up, with further improvements observed for self-reported internalizing problems and parent-reports of youth anxiety. Developmental factors were significantly associated with changes in school attendance, school-related fears, and parent-reported internalizing problems. Adolescents, parents, school staff, and clinicians rated the treatment as acceptable. Developmentally-appropriate CBT shows promising efficacy and acceptability for the treatment of adolescent school refusal.

## Introduction

School attendance problems such as truancy and anxiety-based school refusal pose a serious threat to a young person's academic and social-emotional development (Kearney, 2001). Anxiety-based school refusal (hereafter school refusal) is characterized by the young person having difficulty attending school and experiencing problematic levels of fear or anxiety (Berg, 2002; Egger, Costello, & Angold, 2003). It appears to be associated with developmental pathways different from truancy (Egger et al., 2003) and warrants anxiety-focused interventions (Heyne & Rollings, 2002). The most commonly evaluated treatment for school refusal, cognitive-behavioural therapy (CBT), has shown efficacy in promoting school attendance and reducing emotional symptoms (Heyne et al., 2002; King et al., 1998, 2001; Last, Hansen, & Franco, 1998).

Adolescent school refusers appear to be less responsive to CBT relative to children (Bernstein et al., 2000; Heyne, 1999; Last et al., 1998), which may be explained by several factors. School refusal in adolescence is more severe, involving greater absenteeism (Hansen, Sanders, Massaro, & Last, 1998). Further, as anxiety-disordered adolescents often have concurrent anxiety disorders and mood disorders (Ollendick, Jarrett, Grills-Taquechel, Hovey, & Wolff, 2008), it is likely that adolescents refusing to attend school similarly display greater diagnostic comorbidity relative to younger children. Another important consideration with respect to the treatment response of adolescent school refusers is the influence of developmental factors on the CBT therapeutic process (Sauter, Heyne, & Westenberg, 2009). For example, engagement in cognitive therapeutic techniques is influenced by the adolescent's CBT-relevant cognitive capacities (Manassis, 2009). In particular, those adolescents who have poor self-reflection and insight into thoughts, feelings, and behaviours may benefit less from CBT (Grave & Blissett, 2004), especially if treatment is not appropriately tailored to the cognitive capacities of these adolescents. Autonomy development can also impact CBT process and outcomes (Stallard, 2002b). Adolescent school refusers may prefer to decide for themselves about 'when and how' they return to regular school attendance, due to defiance fuelled by strivings for autonomy (Rubenstein & Hastings, 1980).

It seems imperative that CBT for school refusal be designed and delivered in a developmentally-appropriate way (Heyne, 2006). Sufficient attention must be paid to comorbid depression; the selection and delivery of cognitive therapeutic techniques should be guided by the adolescent's cognitive capacity; and autonomy strivings need to be considered when planning the parents' role in facilitating exposure (Sauter et al., 2009). Examples of developmentally-appropriate treatments for anxious adolescents have begun to emerge (e.g., Siqueland, Rynn, & Diamond, 2005), but until recently no adolescent-focused CBT for school refusal existed. Based on a review of the literature, Heyne, Sauter, and Van Hout (2008) modified and extended an existing practitioner guide (Heyne & Rollings, 2002) to promote clinician developmental appropriateness



when working with school-refusing adolescents. The resulting '@school project' treatment directs clinician attention to developmental factors including comorbid depression, adolescent cognitive capacity, and adolescent-parent problem-solving of school attendance issues. The present study examined the efficacy of this treatment in an open trial. It was hypothesized that treatment would be associated with increased school attendance, reduced emotional symptoms, and increased adolescent and parental self-efficacy. The relative importance of developmental variables (i.e., cognitive capacities; autonomy; clinician developmental appropriateness) in predicting treatment outcome was examined. No prior studies of treatment for school refusal or treatment for internalizing problems have addressed this question and thus it was examined exploratively. The acceptability of the developmentally-appropriate treatment was also investigated.

## Method

### Participants

Participants were referred to the study via the outpatient clinic of the Curium-LUMC, Leiden University Medical Centre (hereafter Curium) by schools, education welfare officers, general practitioners, and mental health professionals. Adolescents aged 10 to 18 years were included in the study if they met Berg and colleagues' (Berg, 2002; Berg, Nichols, & Pritchard, 1969) criteria for school refusal, operationalized as follows: i) less than 80 percent attendance during the past two school weeks (excluding legitimate absences); ii) presence of a DSM-IV anxiety disorder (except obsessive-compulsive disorder and posttraumatic stress disorder); iii) parents could account for the adolescent's whereabouts on days absent; iv) no current DSM-IV conduct disorder; v) current expressed parental commitment for their child to achieve regular school attendance.

Of the 32 families who took part in pre-treatment assessment, 12 were excluded in accordance with the following criteria: the absence of an anxiety disorder ( $n = 2$ ), IQ < 80 ( $n = 2$ ), autism spectrum disorder ( $n = 1$ ), severe psychiatric disturbance requiring immediate attention ( $n = 2$ ), seeking alternative treatment ( $n = 2$ ), and adolescent refusal to participate in assessment despite motivational sessions ( $n = 3$ ). Of the 20 families starting treatment (the intent-to-treat sample; ITT), one family withdrew during treatment to obtain assistance for difficulties associated with a probable autism spectrum disorder. Nineteen families were treatment completers (TC) who participated in post-treatment assessment, and 15 participated in the two-month follow-up.

The ITT sample comprised 14 males and 6 females of Dutch origin whose mean age was 14.6 years (range 11-17 years) and mean IQ was 100 (range 80-129; WISC-III, Wechsler, 1991). The average length of the current episode of school refusal was 6.5 months, and 65 percent had not attended school at all in the last two weeks. The adolescents' primary diagnoses were social phobia ( $n = 8$ ), generalized

anxiety disorder ( $n = 4$ ), anxiety disorder not otherwise specified (NOS) ( $n = 4$ ), major depressive disorder ( $n = 2$ ), dysthymia ( $n = 1$ ), and panic disorder with agoraphobia ( $n = 1$ ). Seventy-five percent had one or more comorbid disorders ( $n = 12$  additional anxiety disorder;  $n = 7$  additional mood disorder;  $n = 3$  additional attention deficit and hyperactivity disorder). Fourteen adolescents (70%) came from a two-parent family. Where possible, both parents (including divorced parents with joint custody of their children) were encouraged to participate in assessment and treatment. Ultimately, 19 mothers and 13 fathers participated in the treatment sessions.

### Design and procedure

Following referral, parents took part in telephone screening. The family was invited to participate in pre-treatment assessment if screening suggested that inclusion and exclusion criteria would be met. At pre-treatment, measures were administered by project clinicians or Master's-level students. Clinicians were five psychologists with Master's-level training in clinical/developmental psychology and one with post-graduate training in clinical psychology. During pre-treatment assessment, families were given information about the study and invited to provide written consent to participate. At post-treatment and two months following treatment, assessments were conducted by Master's-level students blind to treatment progress. The Committee for Medical Ethics of Leiden University Medical Centre approved the conduct of this study.

### Assessments

Treatment outcome was assessed as follows. *School attendance* (% half days attended in 2 weeks prior to assessment) was based on inspection of school-based attendance registration. Irregularity in Dutch registration systems (Steketee, Mak, & Tierolf, 2009) meant that parent reports of school attendance were required in some cases at pre-treatment ( $n = 5$ ), post-treatment ( $n = 6$ ) and follow-up ( $n = 9$ ). The *Anxiety Disorders Interview Schedule for Children* (ADIS-C/P; Silverman & Albano, 1996; Dutch translation and adaptation by Siebelink & Treffers, 2001) permitted the formulation of composite diagnoses in accordance with DSM-IV (American Psychiatric Association [APA], 1994), and it possesses good psychometric properties (Rapee, Barrett, Dadds, & Evans, 1994; Silverman & Eisen, 1992). Clinicians rated the global functioning of each adolescent using the *Global Assessment of Functioning Scale* [GAF] (APA, 1994). The *School Fear Thermometer* (SFT; Heyne & Rollings, 2002) and 12 school-related items from the *Fear Survey Schedule for Children-Revised* (FSSC-R-SI; Ollendick, 1983; Dutch translation and adaptation by Oosterlaan, Prins, Hartman, & Sergeant, 1995) assessed school-related fears. Child and parent versions of the *Multidimensional Anxiety Scale for Children* (MASC and MASC-P; March, 1997; Dutch translation and adaptation by Utens & Ferdinand, 2000, 2006) and the *Children's Depression Inventory* (CDI; Kovacs, 1992; Dutch translation and adaptation by Braet & Timbremont, 2002)

were used to assess the adolescents' anxious and depressive symptoms. These are both valid and reliable instruments (Baldwin & Dadds, 2007; Kovacs, 1992; Rynn et al., 2006). The well-established *Youth Self Report* (YSR; Achenbach, 1991b; Dutch translation and adaptation by Verhulst, Van der Ende, & Koot, 1997) and *Child Behavior Checklist* (CBCL; Achenbach, 1991a; Dutch translation and adaptation by Verhulst, Van der Ende, & Koot, 1996) assessed internalizing and externalizing problems via self- and parent-report respectively. Adolescents and parents completed self-efficacy questionnaires (*Self-Efficacy Questionnaire for School Situations-Dutch version* [SEQ-SS-NL]; Heyne et al., 2007; *Self-Efficacy Questionnaire for Responding to School Attendance Problems* [SEQ-RSAP]; Heyne, Maric, & Westenberg, 2007).

For the prediction analyses, adolescents were administered two psychometrically-adequate instruments. The *Self-Reflection and Insight Scale for Youth* (SRIS-Y; Sauter, Heyne, Blöte, Van Widenfelt, & Westenberg, in press) contained two subscales which measured respectively self-reflection and insight. The *Adolescent Autonomy Questionnaire* (AAQ; Noom, Dekovic, & Meeus, 2001) contained subscales which measured respectively attitudinal, emotional, and functional autonomy. In addition, the *Clinician Developmental Appropriateness Scale* (CDAS; Sauter, 2009) was used by trained observers blind to treatment progress to rate 20% of recorded therapy sessions according to developmental appropriateness (0 = not at all to 3 = very much/always; exemplary item: 'Uses different techniques to access automatic thoughts').

All participants completed the *Multidimensional Assessment of Non-Specific Aspects of Treatment* (MANSAT; Sauter, Heyne, & Michalopoulos, 2006) which assessed treatment credibility, acceptability, satisfaction, and safety (maximum subscale score = 8). Participants were also asked to give the treatment a grade out of ten.

## Treatment

Adolescents and their parents received a developmentally-appropriate modularized CBT for adolescent school refusal, the '@school project'. Given the large individual differences among adolescents (Weisz & Hawley, 2002) and the heterogeneity in the school refusal population (Heyne, 2006), the '@school project' was designed to permit flexibility in treatment delivery. A clinical case formulation based upon pre-treatment assessment informed treatment planning (i.e., the selection, timing, dosing, and developmental tailoring of manualized treatment modules; Chorpita, 2007). A treatment plan for adolescent and parent sessions was collaboratively developed by the clinicians and clinical supervisor at pre-treatment. The plan was reviewed and was adapted if needed at 1/3 through treatment and 2/3 through treatment. The treatment manual incorporated cognitive-behavioural interventions in the form of compulsory modules and optional modules (for a description of the '@school project' modules and treatment planning, see Sauter, Heyne, Ollendick, Van Widenfelt, & Westenberg [2010]). Modules prompted clinician consideration of developmentally-

appropriate parent-involvement (i.e., a balance between an autonomy-granting role and an authoritative role in facilitating attendance); and the use of developmentally-appropriate language, activities, and materials. Several treatment modules specific to the adolescent age group were introduced into the '@school project' (e.g., 'Dealing with Depression') and others were adapted to account for the specific developmental capacities and needs of adolescents (e.g., 'Dealing with Cognition').

Treatment was delivered individually, and one clinician worked with the young person while another worked with the parent(s). Ten to sixteen sessions were conducted with the adolescent ( $M = 12.95$ ) and with his/her parents ( $M = 12.45$ ). Most commonly, two of these sessions ( $M = 1.7$ ) were conducted jointly with the adolescent and parents. School staff (e.g., year coordinators) were involved in one or two school-based meetings ( $M = 1.7$ ) and regular telephone/email contact. In the first half of treatment, families ideally attended sessions twice a week to facilitate early resumption of school attendance. In the second half of treatment sessions were scheduled weekly to allow for trouble-shooting during the adolescent's efforts to attend school regularly. On average, the treatment took place across 16 weeks ( $SD = 5.81$ ). Two booster sessions were offered in the two months following treatment ( $M$  uptake: adolescents = .75, parents = .45).

## Treatment integrity

Efforts to promote treatment integrity included 20-day clinician training in the treatment manual, supervised treatment of two pilot cases prior to study inclusion, and weekly supervision by a registered cognitive-behavioural therapist. Treatment sessions were recorded on DVD and a random sample (20%) was reviewed for adherence to the manual. A scoring protocol was developed to assess 'module adherence' [MA] (i.e., adherence to each module component; 0 = not covered; 1 = covered inadequately; 2 = covered adequately; 3 = covered more than adequately). MA was assessed by independent observers trained to adequate inter-rater reliability ( $ICC > 0.60$ , Cicchetti & Sparrow, 1981) before scoring adolescent sessions ( $n = 46$ ) and parent sessions ( $n = 44$ ). Clinicians adhered adequately to the treatment manual ( $M$  MA = 2.4 for adolescent sessions and 2.2 for parent sessions).

## Data analysis

Data from the ITT sample were used to test the hypothesis that treatment would be associated with improvements in school attendance, emotional symptoms, and self-efficacy. The Last Observation Carried Forward method was used for missing data. Repeated measures analyses of variance were conducted with outcome measures, using repeated contrasts to compare means at the different assessment moments. Within-subjects effect sizes (i.e.,  $d$ ) were obtained and interpreted in accordance with Cohen's (1988) criteria: .20 (small effect), .50 (medium effect), and .80 (large effect). The ITT sample was also used to investigate treatment response, reliable change, and

clinically significant change. Treatment responders/non-responders were classified on the basis of the absence/presence of an anxiety disorder at follow-up and/or attendance < 90% /  $\geq$  90% at follow-up. Reliable change between pre-treatment and follow-up was determined for key outcome measures for which the Standard Error of Measurement could be determined, namely the FSSC-R-SI, CDI, and CBCL-Internalizing, using cutoff type A (Jacobson & Truax, 1991). The clinical significance of change was assessed in relation to school attendance (attendance of  $\geq$  90%; Heyne et al., 2002) and depression (score  $\geq$  13; Kovacs, 1992).

To determine possible associations between developmental variables (i.e., cognitive capacities [SRIS-Y subscales], autonomy [AAQ subscales], clinician developmental appropriateness) and change in residual gain scores of key outcome measures (pre-treatment to follow-up changes in Attendance, FSSC-R-SI, CDI, and CBCL-Internalizing), Pearson's product-moment correlations were calculated using the treatment completer sample. In addition, the means of the developmental variables were compared for the responders and non-responders at follow-up. Developmental variables which showed a significant correlation with outcome variables or a statistically significant difference between responders and non-responders were then entered into simple or multiple regression analyses to assess their predictive value. Treatment acceptability was examined via the descriptive statistics derived from administration of the MANSAT.

## Results

### Treatment efficacy

The results of the repeated measures analyses of variance presented in Table 1 revealed significant improvements across time on the majority of outcome measures. The average effect size of the improvements between pre-treatment and follow-up ( $M$  Cohen's  $d = .79$ ) was larger than the average effect size of changes between pre-treatment and post-treatment ( $M$  Cohen's  $d = .64$ ). Significant time-related increases were found in school attendance levels. According to the repeated contrasts, attendance levels increased significantly between pre-treatment and post-treatment ( $F(1,19) = 8.45, p < .01$ ), with no change between post-treatment and follow-up. At post-treatment, 25% ( $n = 5$ ) of adolescents were free of any anxiety diagnosis. By follow-up, 45% ( $n = 9$ ) were free of any anxiety diagnosis (McNemar test pre-follow-up:  $n = 20, p < .01$ ). At pre-treatment, mood disorders were diagnosed in 45% of the sample ( $n = 9$ ). At post-treatment, seven of these nine adolescents (78%) were free of a mood diagnosis, and the same seven adolescents continued to be free of mood disorder at follow-up (McNemar test pre-post  $n = 20, p < .01$ ; pre-follow up:  $n = 20, p < .01$ ). The adolescents' overall functioning (GAF) increased across time, with repeated contrasts revealing significant changes between pre-treatment and post-treatment ( $F(1, 19) = 18.62, p < .01$ ) and no deterioration at follow-up.

Significant reductions in adolescents' self-reports of fear, anxiety, depression,

and internalizing problems were observed between pre-treatment and follow-up. The repeated contrasts revealed that significant reductions occurred between pre-treatment and post-treatment (FSSC-R-SI:  $F(1,15) = 14.52, p < .01$ , MASC:  $F(1,15) = 19.52, p < .001$ , CDI:  $F(1,15) = 15.99, p < .001$ , YSR-Internalizing:  $F(1,17) = 5.98, p < .05$ ). Further significant reductions in self-reported internalizing problems (YSR) were observed between post-treatment and follow-up ( $F(1,17) = 9.27, p < .01$ ). Self-reported school-related fears (SFT) did not change between pre-treatment and post-treatment, but decreased significantly between post-treatment and follow-up ( $F(1,15) = 5.93, p < .05$ ). Significant reductions in parent-reported youth anxiety (MASC-P) occurred between pre-treatment and post-treatment ( $F(1,15) = 4.79, p < .05$ ), as well as between post-treatment and follow-up ( $F(1,15) = 5.69, p < .05$ ). CBCL-Internalizing decreased significantly between pre-treatment and follow-up ( $F(1,14) = 6.15, p < .05$ ). No changes were observed with respect to externalizing problems as reported by adolescents or parents.

Adolescents reported significant pre-treatment to follow-up improvements in self-efficacy related to school attendance. The repeated contrasts indicated that significant changes occurred between pre-treatment and post-treatment ( $F(1,15) = 14.60, p < .01$ ). Likewise, parental self-efficacy for managing school refusal increased over time, with significant change occurring between pre-treatment and post-treatment ( $F(1,12) = 6.72, p < .05$ ). No significant change was observed between post-treatment and follow-up with respect to adolescent or parent reports of self-efficacy.

Forty-five percent ( $n = 9$ ) of the sample were classified as responders at follow-up (i.e., were diagnosis free and/or attending school  $\geq$  90% of the time). Seven of the nine responders satisfied both criteria. The most common diagnosis amongst non-responders at follow-up was social anxiety (64%,  $n = 7$ ). Reliable change in emotional symptoms at follow-up was observed as follows: 47% on the CBCL-Internalizing, 35% on the FSSC-R-SI, and 41% on the CDI. By follow-up, seven adolescents (35%) attended school at least 90% of the time, and two other adolescents achieved 80% attendance. Of the eight adolescents with clinical levels of depressive symptoms at pre-treatment, four (50%) were no longer in the clinical range at follow-up, with another two adolescents scoring just above the cutoff (score of 14).

**Table 1.** Mean Scores (Standard Deviations) of Outcome Measures at Pre-treatment, Post-treatment and Follow-up

Variable	Pre-treatment	Post-treatment	Follow-up	F	d Post	d FUP
Attendance (%)		Self-report	47.75 (46.68)	8.95**	.67	.85
SFT	15.25 (27.60)	40.50 (45.59)	28.94 (34.76)	2.37 <sup>a</sup>	.18	.59
School-related items of the FSSC-R-SI	49.44 (34.68)	43.00 (36.37)	15.69 (3.44)	16.00**	.65	.87
MASC	19.50 (5.13)	16.75 (3.00)	34.41 (20.78)	11.53**	.56	.54
CDI	45.69 (20.83)	34.19 (18.85)	9.25 (7.64)	17.07**	.67	.75
YSR Internalizing (T scores)	15.56 (9.14)	10.25 (6.36)	55.06 (14.09)	7.31***	.45	.73
YSR Externalizing (T scores)	64.17 (10.80)	58.89 (12.85)	45.00 (8.61)	2.04	.34	.34
SEQ-SS-NL	48.22 (10.34)	45.00 (8.73)	92.50 (11.71)	10.76***	.90	1.04
	80.81 (10.73)	90.06 (9.90)				
MASC-P		Parent-report	34.55 (18.04)	8.93***	.38	.73
CBCL Internalizing (T scores)	49.14 (21.80)	40.69 (22.86)	58.53 (14.57)	4.65**	.52	.78
CBCL Externalizing (T scores)	68.00 (9.18)	62.27 (12.43)	48.87 (10.78)	1.34	.06	.40
SEQ-RSAP	53.20 (10.27)	52.53 (10.74)	87.25 (10.98)	6.75***	.76	1.06
	76.24 (9.81)	83.31 (8.75)				
GAF		Clinician-report	63.00 (17.27)	12.27***	1.05	.99
	50.50 (4.84)	60.10 (12.04)				

Note. Attendance: % attendance in 2 weeks prior to assessment; CBCL: Child Behavior Checklist; CDI: Children's Depression Inventory; FSSC-R-SI: Fear Survey Schedule for Children-Revised; GAF: Global Assessment of Functioning Scale; MASC: Multidimensional Anxiety Scale for Children; MASC-P: Multidimensional Anxiety Scale for Children-Parent Version; SFT: School Fear Thermometer; SEQ-RSAP: Self-Efficacy Questionnaire for Responding to School Attendance Problems; SEQ-SS-NL: Self-Efficacy Questionnaire for School Situations-Dutch Version; YSR: Youth Self Report. All parent-report data was based on mothers' reports given low completion rates by fathers. Significance level of .05 was maintained because the small sample size resulted in an increased probability of a Type II error (Lerman, 1996).

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$  (One tailed).  $d$  = Cohen's  $d$ . <sup>a</sup> Greenhouse-Geisser correction applied.

## Prediction of treatment outcome

No significant associations were found between demographic variables (age, gender, SES) and developmental variables or outcome variables; therefore these variables were not included in the regression analyses. Change in attendance was significantly associated with clinician developmental appropriateness ( $r = .71, p < .01$ ). Significant positive associations were also found between change in school-related fears (FSSC-R-SI) and three developmental variables: insight (SRIS-Y;  $r = .67, p < .05$ ), functional autonomy (AAQ;  $r = .59, p < .05$ ), and emotional autonomy (AAQ;  $r = .58, p < .05$ ). Change in internalizing problems (CBCL) was significantly and negatively associated with functional autonomy (AAQ;  $r = -.59, p < .05$ ). No significant associations were found between change in self-reported depressive symptoms and the developmental variables. Likewise, no significant differences were found between the responders and non-responders with respect to mean scores on the developmental variables.

**Table 2.** Main Results of Regression Analyses for the Prediction of Change in Attendance, Self-Reported School-Related Fears, and Mother-Reported Internalizing Problems.

	B	SE B	$\beta$
Attendance CDAS	1.99	.55	.71**
CBCL-INT Functional autonomy subscale of the AAQ	-.11	.05	-.59*
FSSC-R-SI SRIS-Y Insight subscale	.06	.02	.56*
Emotional autonomy subscale of the AAQ	.07	.03	.44
Functional autonomy subscale of the AAQ	.03	.04	.21

Note. AAQ: Adolescent Autonomy Questionnaire; Attendance: % attendance in 2 weeks prior to assessment; CBCL: Child Behaviour Checklist; CDAS: Clinician Developmental Appropriateness Scale; FSSC-R-SI: Fear Survey Schedule for Children-Revised; SRIS-Y: Self-Reflection and Insight Scale for Youth.  
\*  $p < .05$ ; \*\*  $p < .01$ .

Results of the regression analyses are presented in Table 2. The simple regression analysis predicting change in school attendance indicated that clinician developmental appropriateness accounted for a significant proportion of the variance ( $R^2 = .52, p < .01$ ), and the simple regression analysis predicting change in internalizing problems indicated that adolescent functional autonomy accounted for a significant proportion of the variance ( $R^2 = .35, p < .05$ ). The results of the backwards stepwise multiple regression analysis predicting change in school-related fears revealed that insight accounted for approximately a third of the variance ( $R^2 = .35, p < .05$ ). Entering emotional autonomy and functional autonomy did not contribute significantly to the model.

### Treatment acceptability

Across all respondents (adolescents, parents, school staff, and clinicians), satisfaction with the '@school project' was high ( $M = 6.18$ ;  $SD = 1.49$ ). Averaged ratings were also high for treatment acceptability ( $M = 6.61$ ,  $SD = .92$ ), credibility ( $M = 7.03$ ,  $SD = .88$ ), and safety ( $M = 7.48$ ,  $SD = 1.10$ ). The average grade (out of 10) for the '@school project' was 7.9 by adolescent reports ( $SD = 1.39$ ), 8.3 by parent reports ( $SD = 1.63$ ), and 6.9 by school staff ( $SD = 1.81$ ).

### Discussion

The current study presents a preliminary evaluation of the efficacy and acceptability of the '@school project' for adolescent school refusers. In support of the hypothesis, self-reported fear, anxiety, depression and internalizing problems, and parent-reported anxiety and internalizing problems decreased significantly across time, with medium to large effect sizes on average. Forty-five percent of the adolescents attended school at least 80 percent of the time at follow up, and almost half (45%) were free of any anxiety disorder at two-month follow-up. This remission rate is noteworthy, because it is in line with recent CBT studies which did not focus on anxious adolescents alone, but on samples combining anxious adolescents and children (Bodden et al., 2008; Liber et al., 2008). In addition, the average attendance rate at post-treatment was in line with other studies of interventions for school-refusing children and adolescents (range 47%-100%; Pina, Zerr, Gonzales, & Ortiz, 2009).

The increase in school attendance as reported in the current study is particularly encouraging in view of Bernstein and colleagues' (2000) study of anxious-depressed school-refusing adolescents receiving CBT+imipramine or CBT+placebo. In the current study, mean pre-treatment attendance was similar to that in Bernstein et al., but the post-treatment attendance level in the current study ( $M = 40.5\%$ ) was considerably higher than in Bernstein and colleagues' CBT+placebo condition ( $M = 27.6\%$ ). This might be explained by the developmental appropriateness of the current treatment, or by the higher rate of comorbid depressive disorder in the study of Bernstein et al. Comparing the results of the current study with those of studies combining school-refusing children and adolescents (e.g., Heyne et al., 2002; King et al., 1998), inferior response rates were found with respect to improved school attendance and remission of anxiety disorder. However, it is possible that the developmentally-appropriate '@school project' yielded higher response rates than would have been achieved if the adolescents in the current study had received earlier versions of CBT for school refusal (i.e., Heyne & Rollings, 2002).

It is noteworthy that social anxiety disorder was the most prevalent diagnosis at pre-treatment ( $n = 8$ ; 40%), and the most common disorder among non-responders at post-treatment and follow-up. Bernstein, Hektner, Borchardt, and McMillan (2001) also reported that social anxiety disorder and avoidant disorder were the most common diagnoses among adolescents participating in a one-year follow-up of the

Bernstein et al. (2000) study. School-refusing adolescents presenting with social anxiety may experience particularly severe anxiety when faced with return to regular school attendance, due to the complex and unpredictable nature of social situations in high schools (Albano, 1995). Although the current treatment contained a module directed at enhancing social competencies related to school refusal (e.g., how to deal with questions from classmates about absence from school), some socially anxious school-refusing adolescents may benefit from additional anxiety management strategies such as medication (e.g., Bernstein et al., 2000, 2001) or group-therapeutic components aimed at facilitating exposures to social situations (e.g., Albano, 1995).

The majority of mood-disordered adolescents in the current study were free of their mood disorder at post-treatment and at follow-up. Previously, clinical researchers have recommended "aggressive" treatment for anxious-depressed school refusers, potentially incorporating medication (Bernstein et al., 2000, p. 212). Several aspects of the current treatment may account for the reduction in mood disorders in the absence of medication. The current treatment involved more sessions (approximately 13 sessions versus 8 sessions in Bernstein et al., 2000), it included a module directed at managing depressive symptoms (i.e., behavioural activation), there was greater parental participation, and parent-adolescent problem-solving sessions were incorporated.

Adolescent school refusers reported greater self-efficacy between pre-treatment and follow-up, echoing the findings of previous studies of CBT for school refusal (Heyne et al., 2002; King et al., 1998). Such increases in perceived ability to cope with attendance-related situations may have contributed to the observed increase in school attendance (Maric, Heyne, MacKinnon, Van Widenfelt, & Westenberg, 2010). Mothers also reported a significant increase in self-efficacy for managing school refusal, suggesting that parent-focused work in the '@school project' helped to support and empower parents. Enhanced parental self-efficacy may lead parents to play a greater role in facilitating exposure, thereby fostering the adolescent's sense of mastery and self-efficacy (Wood, McLeod, Sigman, Hwang, & Chu, 2003).

We also examined the role of developmental factors in predicting treatment outcome. These findings must be interpreted with caution given the small sample size, but it is important to speculate on their meaning. The more a clinician was developmentally-appropriate in conducting the treatment with the adolescent, the greater the increase in attendance. Clinicians who are highly developmentally-appropriate may be selecting and applying treatment strategies in a way which best fits with the needs and capacities of their adolescent clients. This may increase an adolescent's receptiveness to therapeutic strategies aimed at helping them to 'face their fears' (Sauter, Heyne, & Westenberg, 2009), which in turn may facilitate increases in school attendance. Higher levels of adolescent insight predicted greater reductions in reports of school-related fears. Adolescents with more insight into thoughts, feelings, and behaviours may be better placed to acquire and employ strategies to

cope with fear-evoking stimuli relative to their less cognitively-advanced counterparts. Finally, greater functional autonomy predicted smaller changes in mother-reported internalizing problems. Adolescents who strive for and achieve functional autonomy (i.e., implementing strategies to achieve their own goals; Noom et al., 2001) may be reluctant to comply with clinician and parent prompts to confront anxiety-provoking situations, resulting in fewer reductions in emotional symptoms. In all, the results of these prediction analyses reinforce the value of closely considering developmental factors in the design and delivery of CBT for anxious adolescents.

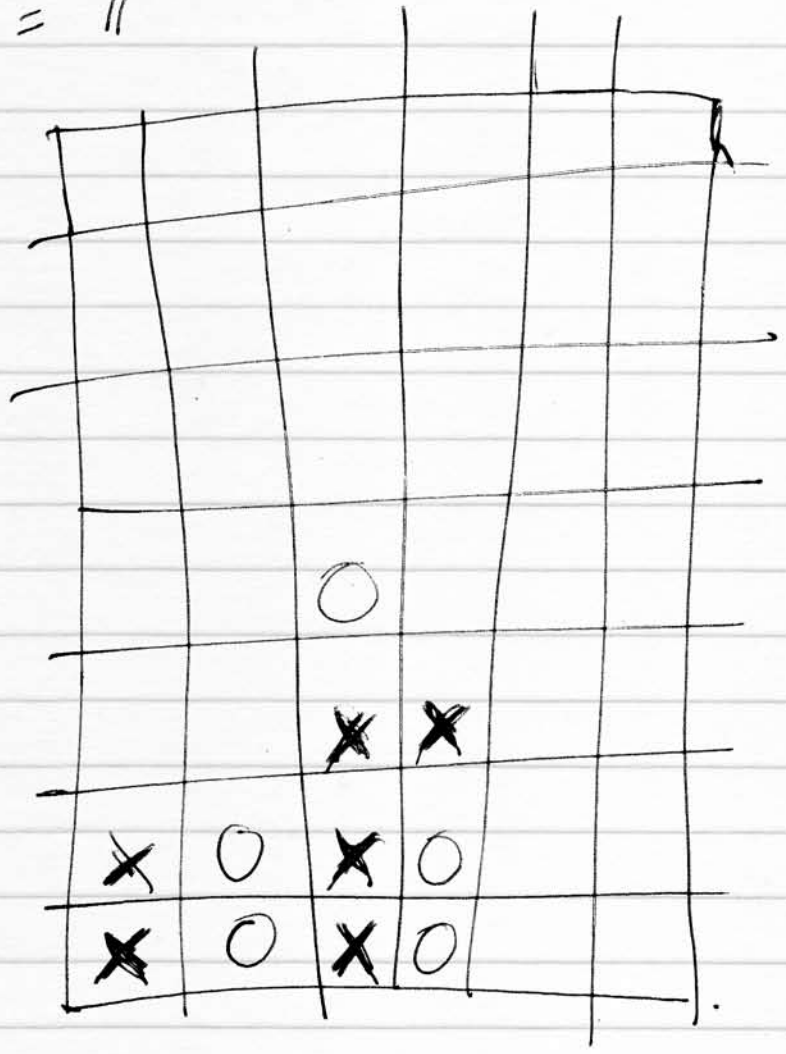
Responses from all participants in the '@school project' suggested that the newly developed treatment was highly acceptable. It is tenable that the perceived acceptability of the treatment contributed to the very low attrition rate. The modularization of CBT may have contributed to its acceptability for adolescent clients, in that it allowed for individualization of treatment through flexibility in the selection, timing, and dosage of therapeutic strategies (Weisz & Hawley, 2002).

Several limitations of the study are noteworthy. Firstly, the relatively small sample size resulted in reduced power to detect effects. Secondly, this was an uncontrolled study. Thirdly, the sample was ethnically homogenous and included more males than females. To determine the generalizability of the findings, evaluation in a larger randomized controlled trial is recommended, including comparison with other treatments (e.g., CBT+medication), further development and emphasis on treatment components aimed at the management of social anxiety, and a longer follow-up.

In conclusion, this study provides initial support for the efficacy of a developmentally-appropriate treatment for school-refusing adolescents aimed at reducing internalizing problems, increasing regular school attendance, and increasing self-efficacy. It is also the first study to demonstrate increases in parental self-efficacy for managing school attendance problems. The treatment may be particularly beneficial for adolescent school refusers experiencing depression symptoms, a common phenomenon in this age-group. Further adaptations to the treatment protocol may be needed to better respond to the needs of school-refusing adolescents with social anxiety. Finally, based on a unique exploration of the association between developmental factors and CBT outcomes, the results lend tentative empirical support to the oft-cited notion that clinicians who take the developmental needs and capacities of their adolescent clients into account are more likely to enhance the effectiveness of their treatments.



X = ### III  
O = II



## Chapter 6

### General Discussion

X = ~~### III~~  
O = ~~II~~

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.



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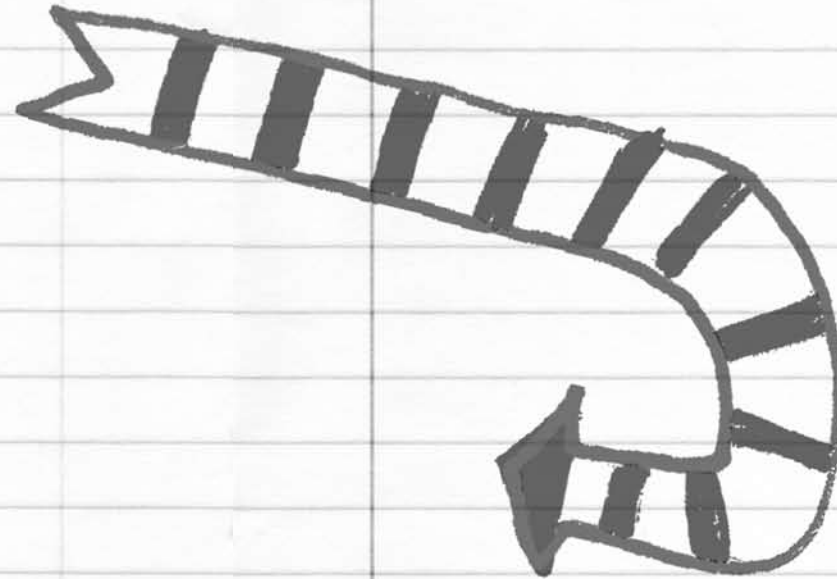
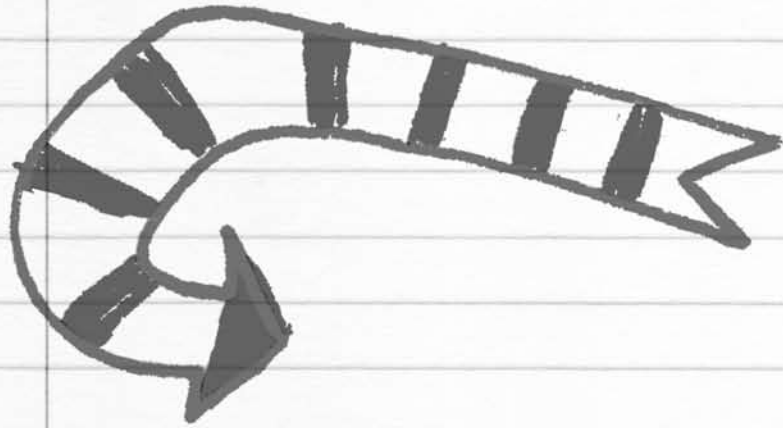
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Nederlandse Samenvatting



## Inleiding

Iedere jongere heeft wel eens een dag dat hij of zij niet naar school wil. Angstgerelateerde schoolweigeren (hierna: schoolweigeren) wordt gekenmerkt door: i) het feit dat een jongere het moeilijk vindt om regelmatig naar school te gaan; ii) de jongere thuis blijft als hij of zij niet op school is (d.w.z. de jongere verbergt het schoolverzuim niet voor de ouders); iii) internaliserende problematiek die verbonden is met het naar school gaan (vaak angst, soms in combinatie met stemmingsproblemen); iv) de afwezigheid van gedragsproblemen behalve verzet tegen het naar school 'moeten' gaan; en v) pogingen van ouders (nu of in het verleden) om hun kind naar school te krijgen. Vaak hebben schoolweigerende jongeren ook last van lichamelijke klachten als hoofdpijn, buikpijn en misselijkheid zonder dat hier een medische oorzaak voor te vinden is. Schoolweigeren is anders dan een andere veelbesproken vorm van schoolverzuim: 'spijbelen'. Spijbelen wordt namelijk gekenmerkt door een gebrek aan interesse en motivatie van de jongere om naar school te gaan. Ook gaat spijbelen vaak gepaard met antisociaal gedrag (zie verder Hoofdstuk 1 voor een volledige beschrijving van het begrip 'schoolweigeren').

Als een jongere regelmatig afwezig is van school kan dat een probleem worden voor de jongere zelf, voor de ouders en voor de school. De jongere kan het bijvoorbeeld als frustrerend ervaren dat het hem/haar bij herhaling niet lukt om terug naar school te gaan. Ouders kunnen zich zorgen maken over hun aanpak: doen ze er wel goed aan te blijven proberen hun kind naar school te krijgen? Ook kan schoolweigeren veel administratieve en praktische problemen veroorzaken voor het schoolpersoneel. Langdurige schoolweigeren heeft vaak negatieve gevolgen voor de sociale, emotionele en academische ontwikkeling van de jongere en kan leiden tot ernstige problemen binnen het gezin. Efficiënte en doeltreffende behandelingen voor schoolweigeren zijn daarom noodzakelijk. Er bestaan verschillende interventies voor de behandeling van schoolweigeren. Recent wetenschappelijk onderzoek heeft aangetoond dat cognitieve gedragstherapie (CGT) effectief is in de behandeling van schoolweigeren bij jongeren. Uit onderzoek is echter ook gebleken dat schoolweigerende adolescenten ernstigere problemen vertonen dan schoolweigerende kinderen (bijvoorbeeld, meer verzuim; ernstigere angst- en stemmingsproblemen). Daarom zijn de betreffende adolescenten mogelijke minder vatbaar voor CGT dan kinderen.

Om bovenstaande redenen werd een bestaande en bewezen effectieve CGT voor schoolweigeren aangepast voor gebruik met adolescenten. De resulterende behandeling, het '@school project', werd uitgevoerd en geëvalueerd in een behandelstudie die ontstond door een samenwerking tussen de Universiteit Leiden Sectie Ontwikkelings- en Onderwijspsychologie en Curium-LUMC Academisch Centrum voor Kinder- en Jeugdpsychiatrie. De '@school project' behandeling is vanaf januari 2007 uitgevoerd op Curium-LUMC. Het behandelen van jongeren en hun ouders voor het wetenschappelijk onderzoek is in mei 2009 afgerond.

Drie doelen van de behandelstudie waren: i) een ontwikkelingsgevoelige

CGT voor schoolweigerende jongeren te ontwikkelen en een geschikte testbatterij samen te stellen voor gebruik in de behandelstudie; ii) te bepalen of CGT voor schoolweigeren in adolescentie gepaard gaat met verbeteringen in het functioneren van jongeren en ouders en acceptabel is voor alle deelnemers; en iii) te bepalen of de behandeluitkomsten van CBT voor schoolweigeren in adolescentie worden beïnvloed door ontwikkelingsfactoren van de jongere en door het ontwikkelingsgevoelig toedienen van de behandeling door de clinicus. De werkhypothesen die onderzocht werden in relatie tot het eerste doel waren: (i) dat de jongere en de ouders na de behandeling verbeteringen zouden tonen in een aantal gebieden van hun functioneren (bijv., schoolaanwezigheid, internaliserende klachten en self-efficacy) en (ii) dat de deelnemers de behandeling als acceptabel zouden ervaren. De vraag of ontwikkelingsfactoren van de jongere en de ontwikkelingsgevoelige aflevering van de behandeling de behandeluitkomst zou beïnvloeden, was exploratief van aard.

Scholen, leerplichtambtenaren, huisartsen, Bureaus Jeugdzorg en andere GGZ-instellingen verwezen jongeren tussen de 11 en 18 jaar en hun ouders naar het '@school project'. Dit was ondergebracht bij het Angst en Depressie team van de Polikliniek van Curium-LUMC. Voorafgaand aan de behandeling vond er een psychologisch onderzoek plaats om een goede inschatting te kunnen maken van de geschiktheid van de behandeling voor de jongere. De gegevens die uit het psychologische onderzoek naar voren kwamen werden gebruikt om de behandeling af te stemmen op de specifieke behoeften van de jongere en zijn/haar ouders. Tevens diende het psychologisch onderzoek als een basismeting waarmee in kaart gebracht kon worden welke veranderingen er optraden ten gevolge van de behandeling. Om het effect van de behandeling te evalueren vonden twee nametingen plaats: de eerste twee weken na afronding van de behandeling; de tweede twee maanden na afronding van de behandeling.

Het '@school project' hanteerde een 'drie-sporen beleid': de jongere, zijn/haar ouders en de school werden alle drie intensief betrokken bij de behandeling. De behandeling bestond uit tien tot zestien bijeenkomsten. In de bijeenkomsten vonden gesprekken plaats met de jongere, met de ouders en met beiden gezamenlijk. Ook werden er consultatieve gesprekken gevoerd met de school. De behandeling bestond uit een modulair behandelprotocol en bevatte zowel elementen (modules) uit de cognitieve als uit de gedragstherapie. Aan de cognitieve therapie werd bijvoorbeeld het opsporen en uitdagen van niet-helpende gedachten en de training in oplossingsvaardigheden ontleend. Uit de gedragstherapie stammen het (gradueel) blootstellen aan de gevreesde situatie, het oefenen van ontspanningstechnieken (beide voor de jongere) en de begeleiding van de schoolgang met strategieën. Voorbeelden hiervan zijn het belonen van gewenst gedrag en het negeren van ongewenst gedrag door de ouders.

Aan de behandeling werden ontwikkelingsgevoelige elementen toegevoegd. Bijvoorbeeld, de behandeling bevatte een module voor het omgaan met

stemmingsklachten en een module met psychoeducatie over de tienerjaren. De clinici werden gestimuleerd om gebruik te maken van leeftijdsadequate taal, materialen (zoals werkbladen) en activiteiten. De clinici hielden rekening met de niveau van CGT-relevante cognitieve vaardigheden van de jongere bij de keuze en uitvoering van cognitieve therapeutische strategieën. Ook werden de clinici aangemoedigd de ouders bij de behandeling te betrekken op een manier die paste bij het ontwikkelingsniveau van de jongeren en de vaardigheden van de ouders zelf (zie Hoofdstuk 4 voor een uitgebreid overzicht van de behandeling en het proces van behandelplanning).

Dit proefschrift beschrijft de voorbereidingen, de implementatie en de evaluatie van deze ontwikkelingsgevoelige cognitieve gedragstherapie voor schoolweigerende adolescenten. Na een beschrijving van het begrip 'schoolweigerend' (Hoofdstuk 1) is er een literatuurstudie uitgevoerd om te kijken 'waarom' het belangrijk zou zijn om rekening te houden met ontwikkelingsfactoren bij de behandeling van angstige jongeren. Ook is daarbij aan bod gekomen 'hoe' clinici die met deze doelgroep werken dit het beste zouden kunnen doen (Hoofdstuk 2). Daarna is een vragenlijst aangepast en vertaald naar het Nederlands voor gebruik bij het onderzoek. Deze vragenlijst meet vaardigheden die mogelijk belangrijk zijn voor het kunnen profiteren van cognitieve gedragstherapie, namelijk zelfreflectie en inzicht in gedachten, gevoelens en gedrag (Hoofdstuk 3).

De behandeling is vervolgens toegepast in een behandelstudie. Het proces en de uitkomsten van de behandeling zijn eerst beschreven aan de hand van een casus (Hoofdstuk 4). Daarna is er bij een groep van 20 jongeren gekeken naar de effectiviteit van de behandeling op de korte en de langere termijn (Hoofdstuk 5). In hetzelfde hoofdstuk worden ook de voorspellende waarde van een aantal ontwikkelingsfactoren en de vraag hoe acceptabel de behandeling was voor de deelnemers aan de orde gesteld. In het laatste hoofdstuk (Hoofdstuk 6) zijn de resultaten van de bovengenoemde studies samengevat en geïntegreerd. Op basis hiervan is een aantal suggesties opgesteld voor clinici en onderzoekers die werken met deze doelgroep.

## **Interpretaties en implicaties van de bevindingen voor de klinische praktijk en voor het wetenschappelijk onderzoek**

Uit de literatuurstudie in Hoofdstuk 2 komt een aantal kernpunten naar voren die relevant zijn voor clinici en onderzoekers die werken met CGT voor angstige jongeren. Ten eerste blijkt dat er weinig onderzoek is gedaan naar de rol van ontwikkelingsfactoren in de behandeluitkomsten van angstige jongeren. Überhaupt blijkt er zeer weinig bekend te zijn over de behandeluitkomsten van deze doelgroep. Op basis van de aanwezige literatuur over het behandelen van jongeren in het algemeen en het behandelen van angstige jongeren in het bijzonder zijn zes aandachtspunten geïdentificeerd die belangrijk zijn voor het ontwikkelingsgevoelig behandelen van angstige jongeren: i) het onderzoeken (voor en tijdens de behandeling) van CGT-

relevante (cognitieve) vaardigheden; ii) het gebruik van een 'case formulation' of probleemanalyse tijdens het plannen van behandelingen en het maken van een passende selectie van elementen van CGT; iii) aandacht voor de motivatie en betrokkenheid van de jongere tijdens de behandeling; iv) het aanpassen van de taal, de materialen, de activiteiten en het tempo van de behandeling aan de vaardigheden en behoeftes van de jongeren; v) ouders op een ontwikkelingsgevoelige manier betrekken bij de behandeling; en vi) overwegen of het nuttig kan zijn leeftijdsgenoten bij de behandeling te betrekken. Onderzoekers zouden zich in de toekomst meer bezig moeten houden met: i) het ontwikkelen van ontwikkelingsgevoelige cognitieve gedragstheorieën over het ontstaan en voortbestaan van angst bij jongeren; ii) het systematisch evalueren van ontwikkelingsgevoelige CGT's voor angstige jongeren en iii) het nader in kaart brengen van de vraag of ontwikkelingsfactoren invloed hebben op de uitkomsten van CGT's voor angstige jongeren.

Bovenstaande suggesties zijn ook relevant voor het werken met schoolweigerende jongeren. De invloed van de autonomieontwikkeling van schoolweigerende jongeren op de behandeling en met name op de terugkeer naar regelmatige schoolaanwezigheid is iets waar clinici in het bijzonder rekening mee moeten houden. De interactie tussen angst voor schoolgerelateerde situaties en de behoefte aan autonomie kan leiden tot extreme vormen van vermijding, en verzet tegen pogingen van ouders en de clinicus om de jongere naar school te krijgen. Als het overmatige streven naar autonomie een grote rol lijkt te spelen in het onderhouden van de schoolweigerende en training in gezinsprobleemoplossende- en communicatievaardigheden geen oplossing biedt, kunnen aanvullende therapeutische strategieën nodig zijn. Deze strategieën (bijvoorbeeld motivationele technieken) dienen erop gericht te zijn de jongere te stimuleren om het streven naar autonomie voort te zetten op een meer leeftijdsadequate manier en weer naar school te laten gaan. Ook hebben zij als doel de ouders in staat te stellen beter om te gaan met het verzet van de jongere. Dit kan bijvoorbeeld door andere bronnen van steun in te zetten in de thuissituatie op de 'cruciale' momenten, zoals 's ochtends voor het vertrek naar school.

Uit de resultaten van de studie gepresenteerd in Hoofdstuk 3 blijkt dat de Self-Reflection and Insight Scale for Youth [Zelfreflectie en Inzicht Vragenlijst voor Jongeren] een psychometrisch valide en betrouwbaar instrument is dat geschikt is voor afname bij jongeren. De Zelfreflectie subschaal lijkt aanvankelijk minder bruikbaar voor het meten van functioneel en adaptief reflectie over eigen gedachten en gevoelens dan de Inzicht subschaal. Dit komt voort uit het feit dat de laatst genoemde subschaal samenhangt met scores op een mate van internaliserende problematiek. Verder onderzoek is nodig om deze resultaten te bevestigen. Vervolgonderzoek zal ook uit moeten wijzen of het gebruik van vragenlijsten de meest geschikte manier is om CGT-relevante cognitieve vaardigheden te meten. Andere methoden om deze vaardigheden te meten zijn informele inschattingen van de clinicus tijdens de sessies

(bijvoorbeeld door vragen te stellen over de relaties tussen gedachten, gevoelens en gedrag) of (computer) taken. Ook zou de relatie tussen zelfreflectie, inzicht en bepaalde vormen van psychopathologie die vaak voorkomen bij schoolweigerende jongeren (bijvoorbeeld sociale angst en depressie) onderzocht moeten worden. Op deze wijze kan meer inzicht verkregen worden in de werking van CGT. Ook kan dan de vraag beter beantwoord worden voor wie CGT werkt.

De casusbeschrijving in Hoofdstuk 4 is een eerste aanwijzing van de effectiviteit van de ontwikkelingsgevoelige CGT voor schoolweigerende jongeren zoals toegepast in het '@school project'. Klinisch en statisch significante veranderingen in schoolaanwezigheid, angst- en depressiesymptomen en schoolgerelateerde self-efficacy (ofwel, de vraag in hoeverre de jongere zich in staat acht om te kunnen gaan met schoolaanwezigheid) waren direct na de behandeling aantoonbaar. Twee maanden na afronding van de behandeling waren deze veranderingen nog steeds aanwezig.

De casus illustreert treffend hoe ingewikkeld het ontstaan en de instandhouding van schoolweigerende jongeren in de adolescentie kan zijn: kind, ouder, en schoolfactoren waren allemaal opgenomen in de probleemanalyse die een belangrijk onderdeel vormde van de behandeling. De casus laat ook zien hoe een modulaire behandeling er 'in het echt' uitziet; hoe, op basis van de probleemanalyse, verschillende elementen van de behandeling (modules) flexibel toegepast moeten worden om de behandeling zo goed mogelijk af te stemmen op de individuele cliënt. Ook een ander belangrijk facet van de '@school project' behandeling tekent zich in deze casus duidelijk af: de verschillende manieren waarop ouders betrokken kunnen worden bij een behandeling voor schoolweigerende jongeren in de adolescentie. Ouders kunnen een essentiële rol spelen in het proces van terugkeer naar regelmatige schoolaanwezigheid, vooral in gevallen waar het de jongeren zelf niet lukt om hun of haar aanwezigheid op te bouwen. Ouders kunnen een 'steunende' aanpak hanteren. Voorbeelden van deze aanpak zijn de jongere te herinneren aan zijn eigen strategieën in de omgang met angst; pogingen van de jongere om naar school te gaan te belonen; lichamelijke of andere klachten te negeren, en vertrouwen uit te stralen. Ook kunnen ouders een meer 'sturende' aanpak toepassen. Voorbeelden daarvan zijn: duidelijke boodschappen geven over schoolaanwezigheid; en meer verantwoordelijkheid nemen in beslissingen over het 'wanneer' en 'hoe' van de terugkeer naar regelmatige schoolaanwezigheid; een daadkrachtige en doortastende rol spelen in het uit bed komen/naar school gaan. Clinici moeten er echter zorg voor dragen dat de rol van de ouders aansluit bij de vaardigheden en de behoeftes van de jongere, én bij de vaardigheden en draagkracht van de ouders zelf. Confrontaties tussen ouders en jongeren over de terugkeer naar school kunnen een problematische gezinsdynamiek teweegbrengen. Binnen het huidige behandelprotocol kan het voor klinici lastig zijn hiermee om te gaan. In dergelijke gevallen zou bekeken moeten worden of het toevoegen van systemische/gezinstherapeutische behandelstrategieën aan de huidige CGT behandeling behandelwinst op zou kunnen leveren.

In Hoofdstuk 5 blijkt dat, naast de positieve resultaten van de bovengenoemde n = 1 studie, de ontwikkelingsgevoelige CGT voor schoolweigerende jongeren in de adolescentie ook voor een grotere groep effectief is. Twee maanden na afronding van de behandeling ging bijna de helft van de 20 jongeren die begonnen waren aan de behandeling meer dan 80 procent van de tijd naar school en hadden ze geen angststoornis meer. Vrijwel alle jongeren met een stemmingsstoornis hadden die diagnose niet meer twee weken na de behandeling. Twee maanden na afronding van de behandeling waren ze nog steeds vrij van een stemmingsstoornis. De behandeling werd door alle deelnemers aan de studie (jongeren, ouders, scholen en klinici) als acceptabel beoordeeld. Deze resultaten laten zien dat deze moeilijke doelgroep baat kan hebben bij een kortdurende CGT. Met name de toevoeging van de module die strategieën bevat voor de aanpak van stemmingsklachten lijkt een vooruitgang te zijn ten opzichte van eerdere CGT's voor schoolweigerende adolescenten. Ondanks de toepassing van een aanvullende module met sociale vaardigheden bleek de behandeling bij jongeren met een sociale angststoornis echter minder goed aan te slaan. Mogelijk biedt de module deze jongeren onvoldoende handvatten. Schoolweigerende jongeren met sociale angst zouden mogelijk gebaat zijn bij aanvullende behandel-elementen. Voorbeelden hiervan zijn het groepsgewijs oefenen van sociale vaardigheden en medicatie.

Inzicht in gedachten, gevoelens en gedrag, het autonomeniveau van de betreffende jongere én de ontwikkelingsgevoeligheid van de klinici waren gerelateerd aan een aantal behandeluitkomsten. Ondanks dat de ontwikkelingsgevoeligheid van de klinici een positieve impact had op de uitkomsten van de behandeling was het voor hen mogelijk lastig de behandeling in alle gevallen zo aan te passen dat rekening gehouden werd met alle ontwikkelingsfactoren. Een voorbeeld hiervan is dat problemen gerelateerd aan de autonomieontwikkeling van de jongere die zich afspeelden in de gezinscontext (zoals ruzies die plaatsvonden wanneer ouders grenzen stelden aan het gedrag van de jongere) moeilijk te behandelen waren in individuele sessies met de betreffende jongere.

Dit proefschrift beschreef een stapsgewijs proces waardoor men een innovatieve behandeling kan ontwikkelen, toepassen en evalueren. Het feit dat een aantal voorbereidende studies (bijvoorbeeld de literatuur studie en de evaluatie van de SRIS-Y) uitgevoerd werden voordat de behandeling werd ingezet is een kracht van het huidige onderzoeksproject. Het onderzoek naar deze ontwikkelingsgevoelige CGT voor schoolweigerende jongeren had ook echter een aantal beperkingen. Bijvoorbeeld, er was geen controle conditie. Dit betekent dat verder onderzoek moet uitwijzen of de resultaten echt specifiek zijn voor de '@school project' behandeling.

Een aantal aanbevelingen voor de klinische praktijk vloeide voort uit de resultaten van de studies die beschreven zijn in dit proefschrift. Het is belangrijk dat klinici rekening houden met een aantal kenmerken van schoolweigerende adolescenten (bijvoorbeeld, de aanwezigheid van stemmingsproblemen en sociale angst; de cognitieve en autonomieontwikkeling van de jongere, factoren die de

draagkracht van de ouders en dus hun deelname aan de behandeling kan beïnvloeden) om zo goed mogelijk de behandeling aan te laten sluiten bij cliënten en hun ouders. Clinici moeten ook overwegen hoe ze de leerplichtambtenaar op de meest effectieve manier kunnen betrekken bij de behandeling. Bij cliënten die minder baat hebben bij de '@school project' behandeling, zouden klinici een 'stepped care' benadering kunnen toepassen. Bijvoorbeeld, na de standaard behandeling van 16 sessies zouden extra behandelsessies ingepland kunnen worden, medicatie toegediend, of andere behandel-elementen zoals sociale vaardigheidstraining of systemische behandelstrategieën ingezet kunnen worden. Intensievere behandelvormen, zoals dagbehandeling of een klinische opname, kunnen worden overwogen als deze strategieën niet voldoende verbeteringen teweegbrengen.

Een aantal aanbevelingen voor verder onderzoek kwamen voort uit de studies die beschreven zijn in dit proefschrift. Zoals eerder benoemd is het belangrijk dat een gerandomiseerde klinische trial uitgevoerd wordt om de resultaten van Hoofdstuk 5 te repliceren en te bevestigen. In deze trial zou er gekeken moeten worden naar de effectiviteit van de behandeling bij een grotere, meer etnisch diverse steekproef, op korte en langere termijn. Verder onderzoek naar de behandeling van schoolweigerende adolescenten zou ook gericht moeten zijn op het opsporen van factoren die de behandel-effecten beïnvloeden, zogenaamde 'mediators' en 'moderators'.

## Conclusie

Gezien de ernstige korte- en lange termijn gevolgen van langdurig schoolverzuim is een effectieve en efficiënte behandeling van schoolweigerend bij jongeren van groot belang. Dit proefschrift beschrijft een wetenschappelijk onderbouwd en stapsgewijs proces dat gebruikt is om een ontwikkelingsgevoelige CGT voor schoolweigerende jongeren te ontwikkelen, uit te voeren en systematisch te evalueren. De resultaten met betrekking tot de effectiviteit van deze behandeling zijn veelbelovend. Een aanzienlijk deel van de jongeren die deel namen aan de behandeling gingen bij de tweede meting weer regelmatig naar school en hadden geen angstdiagnose meer. De resultaten wijzen ook op de potentiële invloed van ontwikkelingsfactoren als autonomie ontwikkeling en cognitieve vaardigheden bij de behandeling van schoolweigerend in de adolescentie. Hoewel het werken aan het opbouwen van schoolaanwezigheid erg uitdagend kan zijn voor zowel schoolweigerende jongeren als hun ouders waren de deelnemers van het '@school project' zeer tevreden met de behandeling. Het '@school project' kan daarom een waardevolle en laagdrempelige eerste stap zijn voor schoolweigerende jongeren en hun ouders bij het hervatten van een normaal en leeftijdsadequaat ontwikkelingstraject.

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G.B. Stern

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Maarten

## Curriculum Vitae

Floor Margriet Sauter was born on the 14th of April, 1979 in Utrecht, The Netherlands. Following her family’s emigration to Australia in 1983, she graduated from Eastern Goldfields Senior High School in Kalgoorlie, Western Australia in 1997. She went on to complete a Bachelor of Arts degree at the University of Western Australia in 2000, with a double major in Psychology. After her return to the Netherlands, she completed a bridging year in Dutch Studies at the University of Leiden in 2002. She completed her Master’s of Science degree in developmental psychology at the same university in 2004. She conducted her clinical internship at De Jutters, a child and adolescent mental health care service in The Hague. Her Master’s thesis, which explored the prevalence and management of school attendance problems in schools in the Duin en Bollenstreek region, was supervised by Dr. David Heyne. In May 2005 she commenced work on the PhD research which is described in this dissertation, and was involved in the development, delivery, and evaluation of a cognitive-behavioural therapy for adolescent school refusal. During this PhD research she commenced post-master training as a cognitive-behavioural therapist. Floor currently works as a child psychologist at Curium-LUMC. From September 2010, Floor will be working as Parent Management Training Oregon (PMTO) therapist within a treatment outcome study at the Pedagogiek Department, Leiden University and as a child psychologist at the FortaGroep.

