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School Refusal:

The Roles of Anxiety and Cognition.

by

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Abstract

School refusal is a significant problem and is associated with long-term educational and psychological sequelae. However, treatment interventions and services remain inadequate for children who refuse school. School refusal is frequently associated with anxiety and, for this reason, cognitive therapy is often chosen as an intervention for this group of children. Few studies, however, have demonstrated the efficacy of cognitive therapy for school refusal, and it has become apparent that the links between cognition and school refusal have been poorly researched. The review paper discusses the literature on school refusal, anxiety, and cognition, and evaluates the evidence for associations between these factors. Thought is given to the treatment implications arising from this literature and conclusions are drawn with regard to the continued use of cognitive therapy in children who refuse school.

The empirical study aims to provide novel information on the roles of anxiety and cognition in a non-clinical sample of adolescents. A between-groups design was used to explore whether adolescents who refused school differed from a control group, on measures of anxiety, automatic thoughts, and self-efficacy. Relationships between anxiety and measures of cognition were also explored. Statistical analyses revealed no significant differences between the groups on any of the measures. However, clinical levels of automatic thoughts were more frequent in the school refusal group, and positive correlations were established between anxiety and each of the measures of cognition. Implications for treatment and future research are discussed, and limitations of the study are acknowledged.

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School refusal is a significant problem and is associated with long-term educational and psychological sequelae. However, treatment interventions and services remain inadequate for children who refuse school. School refusal is frequently associated with anxiety and, for this reason, cognitive therapy is often chosen as an intervention for this group of children. Few studies, however, have demonstrated the efficacy of cognitive therapy for school refusal. This review addresses this issue by exploring evidence for associations between school refusal, anxiety, and cognition. Based on cognitive models of anxiety, research has demonstrated that trait and test anxiety are associated with interpretative and attentional biases towards threat, as well as increases in negative thoughts and coping self-statements. There is less consistent evidence for cognitive specificity in children's anxiety problems. Some studies have also associated low perceived self-efficacy with anxiety in children. Nonetheless, at the present time there is no evidence linking school refusal difficulties directly to maladaptive cognition. It is argued that future research is required, before definitive conclusions can be made regarding the roles of anxiety and cognition in school refusal.

Keywords: School refusal; Children; Anxiety; Cognition; Cognitive therapy.

School Refusal, Anxiety and Cognition.

Is the Use of Cognitive Therapy Justified?

Overview

Recent changes in government legislation regarding school attendance in the UK (the 1996 Education Act, for example) have led to more attention being paid to reasons for non-attendance and establishing measures that encourage pupils to return to school (DfES, 2002, 2003a). Research over the last few decades has contributed to greater recognition of the fact that children and adolescents (hereon referred to as children) vary greatly in their reasons for non-attendance (e.g. Malcolm, Wilson, Davidson, & Kirk, 2003; McShane, Walter, & Rey, 2001). However, the provision of services and evidence-based treatments for this population still remains somewhat inadequate. The aim of this paper is to provide an overview of the literature on school refusal and the extent to which anxiety is implicated. Evidence for the role of cognition in school refusal will also be reviewed and the implications for cognitive therapy will be discussed.

School refusal

Introduction

School refusal refers to the behaviour of a specific group of children for whom attendance at school is often associated with a significant degree of distress. Kearney

defines school refusal as, "...a child-motivated refusal to attend school or difficulty remaining in classes for an entire day" (2002, p.235). Unlike truanting, school refusal usually occurs with the knowledge of parents or guardians and is often associated with emotional disorders (Berg, 1992). Anxiety, in particular, occurs frequently in this group of children, and diagnoses of separation anxiety disorder or school phobia are common (Flakierska-Praquin, Lindstrom, & Gillberg, 1997; Last & Strauss, 1990). For this reason, cognitive models of anxiety have often been adopted as a means of understanding school refusal behaviour, and have been used as a basis for intervention.

Cognitive models posit that maladaptive cognitions are a causal or maintaining factor in anxiety (e.g., Beck, Emery, & Greenberg, 1985; Clark, 1999; Mogg & Bradley, 1998). Empirical evidence has demonstrated links between anxiety in childhood and interpretation or attentional biases for threatening information (e.g., Dalgleish, Moradi, Taghavi, Neshat-Doost, & Yule, 2001; Dineen & Hadwin, 2004; Weems, Berman, Silverman, & Saavedra, 2001). There is no evidence, however, for the role of cognition in school refusal. Despite the lack of an empirical basis, cognitive-behavioural interventions are a common treatment for school refusal and anxiety (King & Ollendick, 1989; Last, Hansen, & Franco, 1998). Researchers have recognised that, until adequate controlled trials have been undertaken, the utilisation of cognitive treatment approaches may be questionable for this group of children (Elliott, 1999; Kendall & Chansky, 1991; King, Tonge, Heyne, & Ollendick, 2000).

Definitions of school refusal

Although school refusal has been recognised and documented since the early 1900s, the meaning given to the term has varied over time and between researchers (Kearney, 2003). In the 1930s researchers described school refusal or school phobia as persistent non-attendance due to anxiety about some aspect of the school environment or anxiety about leaving a parent (Broadwin, 1932). Similar definitions were used in the 1940s with school refusal being seen as the product of phobic tendencies, consisting of a collection of symptoms and often occurring with acute anxiety or depression (Johnson, Falstein, Szurek, & Svendsen, 1941; Warren, 1948). By the 1970s, school refusal was no longer viewed just as a behavioural manifestation of anxiety; rather, individual differences in psychopathology and family/peer factors were considered to be important (Hersov, 1976).

Although, significant advances have been made in our understanding of school refusal over the last century, changing definitions of the phenomenon have resulted in a lack of consensus amongst researchers and clinicians, about how best to describe school refusal. Even recently, the school refusal literature has been inconsistent with some studies referring to all non-attendees (e.g. Bools, Foster, Brown, & Berg, 1990); some only to children with anxiety disorders (e.g. Heyne et al., 2002; Last & Strauss, 1990); some to children with a range of psychiatric disorders (e.g. King et al., 1998); and others only to truancy (e.g. Farrington, 1996). Such variability has made comparisons between studies and generalisation of research findings difficult.

With this ongoing conflict in the literature about what constitutes school refusal, it is often more helpful to define what school refusal is not. For example, school refusal

should not be confused with cases of parental withdrawal from education (i.e. if a parent is dissatisfied with their child's schooling), or with cases of pupil exclusion from school that typically result from ongoing difficulties in pupil conduct. It has also been argued that 'pure' cases of truancy should be viewed as distinct from school refusal. For example, Berg, Nichols, and Pritchard (1969) describe school refusal as consisting of severe difficulties in attending school, severe emotional upset, parental knowledge of absenteeism, and an absence of anti-social and behavioural disorders. The reverse is assumed to be true in cases of truancy. However, recent research has acknowledged that children can demonstrate characteristics of both truancy and school refusal (Bools, Foster, Brown, & Berg, 1990; Egger, Costello, & Angold, 2003). Children with mixed profiles of behaviour may leave school premises without permission on some occasions and on others not attend school with parental knowledge. Conduct problems and emotional disorders are also likely to co-exist in this group of children (Egger, Costello, & Angold, 2003).

For the remainder of this paper, school refusal will refer to child-motivated non-attendance, accompanied by some degree of emotional upset, and occurring with parental consent.

Prevalence

In 1999, the Audit Commission reported that 400,000 (5%) pupils were absent on any one day, in the UK. Of these, 40,000 pupils were estimated to be truanting and 9,000 were reportedly excluded from education. Whilst the remainder of non-attendees were recorded as authorised absences, it is possible that a significant proportion of these

pupils were refusing to attend school. More recently, 6.13% of pupils were recorded as taking authorised absence from school and a further 0.7% took unauthorised absence (DfES, 2003b). Although specific reasons for non-attendance were not discussed it is clear that non-attendance is a significant national problem.

The clinical literature has been able to more accurately identify the prevalence of school refusal. In a large community study undertaken over a period of eight years, Egger, Costello, and Angold (2003) established a 1.6% prevalence rate for anxious-school refusal, a 5.8% prevalence rate for pure truancy, and a 0.5% prevalence rate for mixed cases. Previous reviews have quoted similar prevalence rates of 1-2% in the general population and rates of up to 5% in clinical populations (see King & Bernstein, 2001).

Epidemiological characteristics and aetiology

School refusal appears to be equally common in both sexes (King & Bernstein, 2001) and sex is not a significant predictor of the severity of absenteeism (Hansen, Sanders, Massaro, & Last, 1998). There appear to be some age differences in presentations of school refusal, with separation anxiety disorder being most common in younger children and school phobia being most common in older children (Last & Strauss, 1990). There is also some suggestion that school refusal occurs more frequently in youngest siblings (Bernstein & Borchardt, 1996). In addition, school refusal appears to be most common during significant points of transition, such as changing schools at 7 and 11 years of age (King & Bernstein, 2001).

Children that refuse to attend school share many common physical and emotional features. For many, the prospect of attending school is associated with a significant degree of emotional distress, often resulting in crying, clinging, or temper tantrums. Anxiety and fear about school attendance are common and may result in physiological responses such as vomiting and frequent micturation. Somatisation of physical symptoms also occurs, with children often complaining of headaches, stomach upset, or nausea at the beginning of the school day. These symptoms tend to disappear at the weekend or if the child is allowed to stay at home on a school day. (For reviews, see Berg, 1996; Elliott, 1999; Murphy & Wolkind, 1996).

Numerous studies have explored the reasons for children's non-attendance. Common themes have emerged with issues such as emotional difficulties, bullying or peer pressure, and academic ability, leading to more persistent absence from school (Klerman & Glasscock, 1996; Malcolm, Wilson, Davidson, & Kirk, 2003; Place, Hulsmeier, Davis, & Taylor, 2000; Wright & Wardle, 1996). In particular, academic ability/learning disability, as a motivator or precursor to non-attendance, has been discussed in the research literature over the past few decades but results regarding the true impact on school refusal remain inconclusive. Early work suggested that academic work standards were good in children who refused school but were consistently poor in children who were truant from school (Hersov, 1960). More recently, academic difficulties have been identified as one of a number of factors involved in non-attendance (Klerman & Glasscock, 1996; Wright & Wardle, 1996), with estimates of 31% in one study (McShane, Walter, & Rey, 2001). Low non-verbal IQ was noted in one study (Farrington, 1996) but the sample consisted of both children with school

refusal and delinquent behaviour. Conversely, low verbal IQ and language impairments were identified in another study (Naylor, Staskowski, Kenney, & King, 1994) but generalisability of findings are limited due to the selection of a psychiatric inpatient sample of adolescents. Whether or not academic ability/learning disability contributes to school refusal, persistent non-attendance, for whatever reason, is likely to impact on future learning and make returning to school a difficult task.

Further factors implicated in school refusal include physical health concerns, caring for a family member, and organisation of the school (Klerman & Glasscock, 1996). In a large twelve-month study in the UK, researchers interviewed pupils, parents, and teachers about their perception of absenteeism (Malcolm, Wilson, Davidson, & Kirk, 2003). The results indicated some disparity in the reasons for non-attendance given by each of the groups. Pupils identified boredom, particular lessons or teachers, bullying, peer pressure, social isolation, tests, and the size of the school as reasons for non-attendance. Parents agreed that bullying and peer pressure were major contributors to school refusal but also tended to perceive teachers as part of the problem. Conversely, teachers perceived parenting ability and parental attitude to be the main cause of non-attendance. It is possible that all of these factors contribute to school refusal to some extent.

Research studies are beginning to find that certain children are more at risk of developing school refusal difficulties. For example, associations have been shown to exist between school refusal and parental mental health problems (Martin, Cabrol, LePine, & Mouren-Simeoni, 1999), with estimates of parental psychiatric illness of up to two-thirds in one study (Bools, Foster, Brown, & Berg, 1990). Maternal and paternal

psychiatric illness has also been quoted as 53% and 24% respectively (McShane, Walter, & Rey, 2001). Furthermore, associations between family dynamics and children's school refusal have been identified, where role performance, communication of information, and family subtype (enmeshed, conflictive, detached, isolated) play a role in the cause or maintenance of school refusal (Bernstein & Borchardt, 1996; Bernstein, Svingen, & Garfinkel, 1990; Kearney & Silverman, 1995).

A number of studies have noted that children with anxiety and/or depression are more likely to present with school refusal (Berg, 1992; McShane, Walter, & Rey, 2001; Werry, 1996). In fact, clinical diagnoses of separation anxiety disorder, social phobia, simple phobia, panic disorder, post-traumatic stress disorder, avoidant disorder, and overanxious disorder have been quoted in the literature as being characteristic of children that refuse school (Egger, Costello, & Angold, 2003; Last & Strauss, 1990). Moreover, the presence of a psychiatric disorder is three times more likely in children with school refusal, compared with children who attend school. Similarly, a diagnosis of separation anxiety disorder, simple phobia, or depression is up to eleven times more likely in this population (Egger, Costello, & Angold, 2003).

Sequelae

It is well-established that for many children, fears and phobias are transient and improve over time (Muris, Merckelbach, Mayer, & Prins, 2000). Were this to be the case with school refusal, one would expect children to have relatively short periods away from school and for school-related anxiety to improve without the need for clinical

intervention. School refusal difficulties, however, tend to persist and children go on to develop additional social, psychological and occupational difficulties later in life.

Continued absence from school is associated with serious implications for the child and his or her parent. For the child, poor academic performance, fewer opportunities for higher education or employment, and reduced opportunities to socialise with same-age peers have been associated with school refusal (Malcolm, Wilson, Davidson, & Kirk, 2003). Empirical research has demonstrated that approximately 30% of adolescents remain out of education or employment at 6 months and 3 years post-treatment (McShane, Walter, & Rey, 2004). For parents, the legal repercussions of their child's non-attendance are serious. Under the 1996 Education Act the parent is responsible for securing their child's attendance at school. If parents do not fulfil their legal responsibility the Local Education Authority can take legal action against them, including fines of up to £2,500, a parenting order, or a custodial sentence (DfES, 2002, 2003a).

There is evidence that emotional disorders associated with school refusal continue into adolescence. A one-year follow-up study was carried out to ascertain the outcome for a group of anxious-depressed adolescents, following pharmacological (imipramine) and cognitive-behavioural treatment for school refusal (Bernstein, Hektner, Borchardt, & McMillan, 2001). At follow-up, 64.1% met diagnostic criteria for at least one anxiety disorder and 33% met criteria for a depressive disorder. Similarly, in a five-year follow-up study, Buitelaar, van Andel, Duyx, and van Strien (1994) reported that almost half of their original sample (N=25) retained a psychiatric diagnosis of anxiety disorder, depressive disorder, or conduct/personality disorder.

School refusal also appears to be associated with difficulties in later adult life. A study of 35 adults (who had received treatment for school refusal, 30 years previously), and a matched control group, revealed that school refusal was associated with more psychiatric outpatient care in adulthood. Specifically, one-third of the school refusal sample had a currently diagnosed anxiety disorder (Flakierska-Praquin, Lindstrom, & Gillberg, 1997). Occupational consequences of school refusal have also been highlighted in a study of 411 Cambridge males, monitored over a period of thirty years (Farrington, 1996). Men that had been truant from school during childhood (defined by Farrington as consisting of children that refuse school or children that demonstrate delinquent behaviour), were more likely to have unskilled manual jobs, were less likely to have completed examinations, had an unstable job record, and were more likely to commit criminal offences. Other research has indicated that school refusal may show intergenerational continuity, such that mothers of children that refuse school often experienced school refusal difficulties during their own childhood (Last & Strauss, 1990).

Overall, these studies highlight that up to one-third of children with school refusal behaviour continue to experience academic/occupational and emotional difficulties throughout adolescence and into adulthood. Whilst these findings do not imply that school refusal has a causative role in longer-term emotional difficulties, anxiety, in particular, appears to serve a functional role in the life-long difficulties encountered by this population of children. For this reason, issues relating to anxiety in school refusal will be the focus of the remaining discussion.

Anxiety and School Refusal

Research has clearly demonstrated that anxiety is a significant contributory factor in school refusal behaviour, and a number of research papers have looked at this specifically (e.g. Flakierska-Praquin, Lindstrom, & Gillberg, 1997; Last, Hansen, & Franco, 1998; Last & Strauss, 1990). Some caution must, however, be exercised in concluding that anxiety is the primary cause of school refusal difficulties. In the past, links between anxiety and school refusal were over-stated, partly because of the way in which school refusal was defined several decades ago. There is currently a drive away from diagnostic approaches to more functional approaches that regard anxiety as one of a number of motivating factors that influence school refusal (Kearney & Silverman, 1990, 1993, 1999). This section of the paper begins by exploring the extent to which anxiety is implicated in school refusal and ends with evidence supporting the role of anxiety within a functional framework.

Diagnostic approaches

Historically, school refusal was viewed either as a form of separation anxiety disorder or as a school phobia (see Elliott, 1999, for a discussion). These diagnostic labels were relevant to children that experienced distress when faced with the prospect of leaving their parents, and those that avoided school because they were afraid of some aspect of the school environment. At the time, these diagnoses helped to distinguish children who had genuine psychological difficulties from those who might be defined as truants. The current psychiatric literature retains these ideas. Although school refusal is

not a psychiatric diagnosis in its own right, it is recognised as a behavioural criterion for separation anxiety disorder in the Diagnostic and Statistical Manual IV-TR (American Psychiatric Society, 2000). Separation anxiety disorder alone does not account for every case of school refusal, as school refusal is associated with a range of anxiety diagnoses. The distinction between school refusal and truancy is often difficult to make and differences in psychiatric opinion, in terms of what constitutes school refusal, are likely to impact on the degree to which the criterion for a diagnosis of separation anxiety disorder is met.

Given that the psychiatric literature views school refusal as a product of an anxiety disorder, researchers have studied the prevalence of school refusal in children with diagnosed anxiety disorders. For example, Last and Strauss (1990) reported that almost half of the children referred to an anxiety disorders clinic presented with school refusal difficulties. In this sample, separation anxiety disorder, social phobia, and simple phobia were the most frequent diagnoses in children that refused school. Panic disorder and post-traumatic stress disorder were also observed in a small percentage of the sample.

Other researchers have chosen to look at the prevalence rates of anxiety in school refusal populations. Taking a range of anxiety diagnoses into account, a rate of 14.5% was reported by McShane, Walter, and Rey (2001); 26% by Bernstein, Svingen, and Garfinkel (1990); 32% by Buitelaar, van Andel, Duyx, and van Strien (1994); and approximately 40% by Kearney and Albano (2004).

Even within these selected studies, it is clear that reported prevalence rates of school refusal and anxiety differ quite markedly. On closer inspection, these contrasting

figures appear to represent an artefact of research methodology. For example, the direction of the association between school refusal and anxiety has an impact on the resulting statistics. A much higher rate of co-morbidity is seen if school refusal in anxiety is considered (e.g. Last & Strauss, 1990) than if anxiety in school refusal is considered (e.g. McShane, Walter & Rey, 2001).

Further issues relate to the sampling method and highlight the need for careful interpretation of the results within the school refusal literature. Studies by Flakierska-Praquin, Lindstrom, and Gillberg (1997) and Egger, Costello, and Angold (2003) are cases in point. Flakierska-Praquin and colleagues stated that 100% of their 35 school-refusing participants met diagnostic criteria for separation anxiety disorder. However, in a non-clinical community sample, Egger and colleagues found only a 10.8% rate of separation anxiety disorder, with other disorders accounting for the remainder of the sample. The differences between clinical and non-clinical samples therefore appear significant. However, the type of clinical sample must also be taken into consideration since anxiety diagnoses in children with school refusal differ significantly between inpatient and outpatient clinical samples, with rates of 28% and 14.5% reported respectively (McShane, Walter, & Rey, 2001).

Acknowledging the presence of anxiety in school refusal, however, is not an empirically sound method of delineating the role that anxiety plays in school refusal behaviour. Anxiety might be equally present in a range of other childhood difficulties, yet may not influence the resulting behaviour of the child. Relatively few studies have reported correlational associations between school refusal and anxiety. Egger, Costello, and Angold (2003) used regression analyses and odds ratios to ascertain relationships

between school refusal and anxiety diagnoses. They established that children who refuse school are 11 times more likely to have a diagnosis of separation anxiety disorder or simple phobia compared with school attendees or children that play truant. In contrast, other studies have not found a relationship between trait anxiety and severity of absenteeism (Hansen, Sanders, Massaro, & Last, 1998).

In summary, anxiety is present in a significant number of children with school refusal difficulties. Prevalence estimates vary significantly within the literature but inconsistencies are often the result of methodological differences in the studies. Relatively few studies have established the strength of the relationship between anxiety and school refusal, and those that do report conflicting results. The limitations of a diagnostic approach in the understanding of school refusal difficulties have therefore become apparent. A more comprehensive conceptualisation of school refusal is necessary to explain this heterogeneous phenomenon.

Functional approaches

Rather than viewing school refusal as a symptom of anxiety, functional models incorporate anxiety as just one of a number of motivators in school refusal behaviour (Kearney, 2000; Kearney & Albano, 2004; Kearney & Silverman, 1990,1993). As a result of clinical experience and empirical studies, four functional categories that define the motivational factors associated with school refusal have been ascertained (Kearney & Silverman, 1990). The first category, "avoidance of stimuli provoking negative affectivity", relates to children that refuse school in order to avoid something in the school environment that makes them anxious or distressed (e.g. noisy corridors) and is

similar to definitions of school phobia. "Escape from aversive social situations" is the second category and is defined by school refusal that results from situations causing high social anxiety, such as bullying in the playground. Children that fall into the first or second functional categories primarily refuse school for reasons of negative reinforcement, such that avoidance of a stimulus serves to reduce distress. The third category, "attention from significant others", is shown by children that prefer to stay at home with their parents and is somewhat analogous to separation anxiety disorder. Lastly, the "tangible reinforcement" category relates to children that prefer to stay away from school in order to enjoy other activities, such as watching television. Children that refuse school on the basis of factors in categories three and four, do so for reasons of positive reinforcement, for example, obtaining parental attention or enjoying an activity serves as a reward for not attending school. This functional model therefore accounts for anxiety relating to separation from parents, the school environment, and social or academic evaluation.

Based on this model, Kearney and Silverman developed the School Refusal Assessment Scale (SRAS; Kearney 2002; Kearney & Silverman, 1993). The SRAS consists of a series of statements regarding a child's reasons for non-attendance, as related to each of the four functional categories. The highest scoring condition is considered to reflect the main function of school refusal behaviour. These authors (Kearney 2002; Kearney & Silverman, 1993) and others (Higa, Daleiden, & Chorpita, 2002) have demonstrated good validity and reliability for parent and child versions of this measure.

Studies have supported the role of anxiety in school refusal by comparing frequencies of anxiety diagnoses with scores from the SRAS. For example, Kearney and Albano (2004) established that anxiety disorders generally occurred more often in the "avoidance of stimuli provoking negative affectivity" category and the "escape from aversive social situations" category. Separation anxiety disorder occurred most frequently in the "attention from significant others" category. Children with more severe anxiety diagnoses tended to endorse more items in the "avoidance of stimuli provoking negative affectivity" category. Other interesting findings also arose, with younger children tending to report school refusal for reasons of avoidance or attention, whilst older children reported reasons of escape, or pursuit of tangible rewards.

Summary

This overview has highlighted many of the difficulties associated with understanding links between anxiety and school refusal. Anxiety disorders are prevalent in a significant number of cases. Definitive prevalence rates are not available, however, due to differences in the criteria defining school refusal and the methodology employed in each study. Having considered a functional model of school refusal, it is clear that anxiety is a common, but not universal, factor in motivating non-attendance. Based on the issues raised within this discussion, it would be helpful for future research to report prevalence rates of anxiety within carefully defined samples and to provide evidence of any association between anxiety and school refusal difficulties.

Knowledge of the exact nature of the relationship between anxiety and school refusal has value in pinpointing avenues for clinical intervention. One way of trying to

understand this link is to look at cognitions in children who refuse school. The role of anxious cognition has become a common theme in the literature and will provide a focus for the remainder of this paper.

The Role of Cognition in School Refusal

No studies to date have explored the role of cognition in school refusal. There are, however, many studies demonstrating links between anxiety and cognition that may be relevant to anxiety in school refusal. The following discussion considers the concept of cognition and associated methodological issues. The utilisation of cognitive models is then explored, followed by an evaluation of research looking at the links between anxiety and cognition.

Cognition

Cognition has become an integral part of our understanding of psychological disorders. It has traditionally been divided into cognitive processes and cognitive products (Albano, Beidel, & Turner, 2002). Cognitive processes refer to the means by which information is processed and assimilated within the cognitive system, and include perception, attention, interpretation, and attribution. Cognitive products refer to the accessible end-result of cognitive processes, and include thoughts and self-talk.

Differences in the cognitive processes of anxious and non-anxious children have typically been studied within an experimental environment, using homophone or

homograph tasks (Taghavi, Moradi, Neshat-Doost, Yule, & Dalgleish, 2000), ambiguous vignettes (Chorpita, Albano & Barlow, 1996), dot-probe tasks or modified Stroop tasks (Dalgleish et al., 2003). Whilst these experimental methods are sensitive to subtle differences in information processing, their validity as a measure of children's cognition is determined by differences in reading ability, receptive and expressive language, and cognitive development.

Differences in cognitive products tend to be assessed in two main ways. Endorsement methods are most commonly used and require the child to tick or rate how frequently he or she has a particular thought, as stated on a questionnaire. The most popular of these are the Children's Negative Cognitive Error Questionnaire (CNCEQ; Leitenberg, Yost, & Carroll-Wilson, 1986), the Negative Affect Self-Statement Questionnaire (NASSQ; Ronan, Kendall, & Rowe, 1994) and, most recently, the Children's Automatic Thoughts Scale (CATS; Schniering & Rapee, 2002). The second method of assessing cognition is through production methods such as think-aloud techniques or thought-listing, whereby the child is asked to verbally report or write down thoughts as they occur during a task (e.g. Kendall & Chansky, 1991).

There has been much discussion in the literature regarding the most appropriate means of assessing cognitive products in children, with a range of advantages and disadvantages being highlighted for endorsement and production methods. These papers have highlighted that endorsement measures are easy to administer and score, but that items on a questionnaire may not be representative of a child's actual thoughts. In this case, re-appraisal or selective memory might affect the endorsements, and demand characteristics may influence the answers given. It is also argued that the salience of a

particular thought, or the degree to which it causes distress, cannot be determined by endorsement measures (Glass & Arnkoff, 1997). Furthermore, it is argued that endorsed thoughts should not be viewed as representative of an enduring cognitive style (Leitenberg, Yost, & Carroll-Wilson, 1986). Production methods appear to be more ecologically valid as actual thoughts are generated within an anxiety-provoking situation. However, these too have significant limitations as demand characteristics and high emotionality influence the degree to which a child is willing or is able to accurately report thoughts. It has also been noted that production methods result in reports of either negative or positive thoughts, but rarely both (Kendall & Chansky, 1991). With research purposes in mind, endorsement measures are advantageous, despite their recognised limitations, since questionnaires can be validated, reliable, sensitive to change, and replicable across studies. Some researchers have argued that endorsement measures are the most reliable and the most popular means of assessing cognition in childhood anxiety (Glass & Arnkoff, 1997; Kendall, 1991).

Cognitive models

A strong theoretical base has formed over the last four decades, following the pioneering work of Beck (1976; Beck, Emery & Greenberg, 1985), pointing to the role of cognition in a range of common adult disorders including depression (Beck, 1976), anxiety (Clark, 1999), obsessive-compulsive disorder (Salkovskis, 1985), and low self-esteem (Fennell, 1997).

Cognitive models postulate that psychological disorders can be caused or maintained by maladaptive cognitions, and that modifying cognitions is an effective

means of treating the psychological disorder. Moreover, Beck's *cognitive content-specificity hypothesis* (Beck, Brown, Steer, Eidelson, & Riskind, 1987) suggests that different psychological disorders are characterised by their own unique profile of cognitive errors. Depression, for example, is characterised by global negative thinking regarding the self, the world, and the future. Anxiety differs, in that persons with anxiety tend to perceive threat and danger in their environment, and thoughts are often situation-specific.

Cognitive models of anxiety from the adult literature (e.g. Beck, Emery & Greenberg, 1985; Clark, 1999; Mogg & Bradley, 1998) have been adapted to understand the origins of childhood anxiety. Two main assumptions underpin these models. Firstly, they argue that individuals with anxiety demonstrate an exaggerated perception of threat and danger. Secondly, they propose that individuals with anxiety underestimate their ability to cope with the perceived threat (Beck, 1976). Biases or selectivity in attention towards threat, interpreting ambiguous situations in a negative way, and negative thoughts or self-talk related to threat, occur with greater frequency in adults with anxiety (Fox, Russo & Dutton, 2002; Mathews & MacLeod, 2002; Mogg & Bradley, 1998).

It is not until relatively recently that researchers have begun to evaluate, more critically, the use of adult cognitive models in childhood anxiety disorders (Alfano, Beidel, & Turner, 2002; Kendall & Chansky, 1991). Certainly, developmental issues are likely to have a significant impact on the extent to which models of adult anxiety disorders can explain and influence treatment choices in childhood anxiety. The cognitions of adults with anxiety disorders are likely to be of a long-standing nature and based on a wealth of life-experiences. In contrast, the perceptions and thoughts of

children are likely to be qualitatively, and possibly even quantitatively, different due to limited life experiences and the continuing development of cognitive structures (Vasey & MacLeod, 2001). Younger children are also less able to identify and verbalise complex emotions and thought processes. Currently, the literature appears to be accepting of these limitations and researchers continue to strive for evidence that demonstrates the continuity of maladaptive cognitions across the lifespan (Leitenberg, Yost, & Carroll-Wilson, 1986; Lodge & Tripp, 1995).

Attention will now return to the issue of cognition in childhood anxiety, and indeed in school refusal. Discussion will specifically focus on the evidence for biases in cognitive processing as well as the evidence for maladaptive thoughts and self-statements.

Trait anxiety and cognition

Two studies, using similar methodologies, have described evidence for cognitive biases in children that are similar to those reported in the adult literature. In the initial part of their investigation, Chorpita, Albano, and Barlow (1996) administered an ambiguous situations questionnaire to 12 children aged between 9 and 13 years. This involved the researchers reading 12 short vignettes to the children and asking them to generate responses to each of the situations. Children's responses were then categorised as anxious or non-anxious. Children with higher trait anxiety demonstrated a tendency to interpret the situations in a more threatening way and to express anxious responses as a result. Shortt, Barrett, Dadds, and Fox (2001) provided further evidence for interpretation biases in children. In a much larger study, 147 children, aged 6 to 14

years, were assigned to anxious, externalising, or non-clinical groups. Seven ambiguous situations were discussed with each of the children. Children's interpretations were coded as social threat, physical threat, and non-threat, and solutions to each situation were recorded as pro-social, avoidant, or aggressive. Children in the non-clinical group had significantly less threatening interpretations than children in both the anxious and externalising groups. Further to this, children in the anxious group endorsed more avoidant solutions to the situations than either the externalising or non-clinical groups.

Interpretation bias in clinically anxious children has also been demonstrated using homophone tasks (Taghavi, Moradi, Neshat-Doost, Yule, & Dalgleish, 2000). Seventeen children with a primary diagnosis of generalised anxiety disorder were compared to a control group of 40 children without clinical diagnoses. Clinically anxious children reported significantly more threat-related interpretations of words than children in the control group, and this difference was maintained after the effect of depression was partialled out of the analyses. Such differences appear to indicate that anxious children automatically interpret ambiguous information in a threat-related way.

The previous authors have recently undertaken a more detailed study, utilising a range of experimental procedures (Dalgleish et al., 2003). Attentional dot-probe tasks, modified Stroop tasks, memory tasks, and subjective probability questionnaires were presented to children (aged 7 to 18 years) across depressed, anxious, post-traumatic stress, and control groups. Results from the dot-probe task indicated a greater attentional bias towards threat-related information rather than depression-related information in the anxious group, but no such bias was found in the depressed group. However, the Stroop tasks and memory tasks failed to find a significant difference

between the groups. Participants in the anxious and post-traumatic stress groups were more likely to judge negative events as being more likely to happen to others as measured by the subjective probability questionnaire. Dalgleish et al. (2003) discussed the lack of group differences using the Stroop tasks and memory tasks as being the result of a lack of statistical power.

The majority of the studies in the literature pertaining to information processing biases employ experimental procedures that rely on words. Whilst effects have been demonstrated using these procedures, it could be argued that perceiving threat in individual words or short vignettes is not an ecologically valid measure of cognitive biases. Rather, threat is more likely to be perceived in a range of social environments, with attention being directed to the emotional and behavioural cues used by others. In order to increase the validity of studies in attentional bias, researchers have begun to use faces as stimuli in experimental tasks. For example, Hadwin et al. (2003) examined the relationship between children's trait anxiety and depression and their visual search for threatening and non-threatening facial stimuli. In a non-clinical sample of children, increases in anxiety were associated with decreased reaction times when deciding whether an angry face (rather than neutral or happy) was absent, meaning that anxiety produced longer search times for threatening stimuli. There was no such association between depression and reaction time. Results are therefore supportive of claims that anxious children exhibit increased vigilance towards threat-related stimuli.

Although relatively few studies have been discussed, some tentative conclusions can be drawn with regards to the role of cognitive processes in childhood disorders. There does appear to be a link between negative interpretative biases, biased attention

towards threat cues and trait anxiety in children. Moreover, biases towards threat-related stimuli appear to be specific to children with anxiety and do not extend to children with depression (e.g., Hadwin et al., 2003). However, differences in experimental procedure, variability in age, and limitations in sample size have impacted on the degree to which conclusions can be generalised across clinical and non-clinical samples of children.

There is a large research literature pertaining to the role of cognitive products in anxiety, largely due to the ease at which this data can be collected. A large clinical study investigated the links between specific cognitive errors and trait anxiety in a sample of 251 children, aged 6 to 17 years (Weems, Berman, Silverman, & Saavedra, 2001). The Children's Negative Cognitive Error Questionnaire (CNCEQ) was employed to assess the degree to which four cognitive errors (catastrophising, overgeneralisation, personalising, and selective abstraction; Beck, 1976) were associated with anxiety. All of the four cognitive errors were highly correlated with several measures of anxiety, and these associations remained after controlling for the effect of depression. Following stepwise regression analyses, overgeneralisation was found to be the strongest predictor of trait anxiety. The effects of age and sex were also explored. Results indicated that the correlation between cognitive errors and anxiety became stronger as age increased, but the sex of participants had no such effect.

Ronan, Kendall, and Rowe (1994) developed the Negative Affectivity Self-Statement Questionnaire (NASSQ) as a means of assessing self-statements in children with anxiety and depression. Two versions of the scale were devised (7-11 years and 11-15 years) to reflect age-related differences in children's ability to report cognitive

symptoms. Associations were found between the NASSQ and trait measures of anxiety, with stronger associations being demonstrated in the older age group. Significant differences in pre- and post-treatment scores following a cognitive-behavioural treatment for anxiety also added to the evidence for the anxiety-cognition links in children. Further studies have also employed the NASSQ, to determine whether negative thoughts could differentiate anxious, depressed and chronically ill children (Rietveld, Prins, & van Beest, 2002). Results found that an anxious-depressed group scored highest on the NASSQ, followed by an anxious group, then an asthmatic group, and lastly a control group. Thus, it appears that the frequency of negative cognitions can, to some degree, differentiate children in different diagnostic groups.

Several researchers have begun to argue that it is not just the presence of negative thoughts or cognitive errors that contribute to childhood anxiety, but that the presence of coping thoughts, and the ratio of positive to negative self-statements are important factors in the maintenance of anxiety (Kendall & Chansky, 1991). A positive correlation between negative cognition and coping self-talk when completing a task suggests that anxious children exhibit higher rates of positive *and* negative cognition than non-anxious peers (Prins & Hanewald, 1999). In addition, a lower frequency of negative thoughts, rather than the presence of positive thoughts, is argued to differentiate clinically anxious from non-anxious groups, and having positive thoughts is not sufficient to ensure coping (Treadwell & Kendall, 1996).

In relation to specificity, it is possible that children with any psychological difficulties have more maladaptive cognitions compared to healthy controls and that these results are not specific to anxious children. Whether or not anxious children differ

from children with other disorders is important when considering what might constitute an effective treatment program. Negative automatic thoughts (Beck, 1976) are characteristic of children with internalised emotional problems but, as different disorders are typically mediated by different types of cognitions, practitioners should assess and specify the target cognitions during therapy (Silverman & DiGiuseppe, 2001).

Schniering and Rapee (2002), in the development and validation of the Children's Automatic Thoughts Scale (CATS), investigated whether scores from the four subscales (physical threat, social threat, personal failure, and hostility) could reliably discriminate anxious, depressed, and behaviour-disordered groups, from a community group. Although mean scores were greater in the anxious group, children in both the anxious and depressed groups endorsed significantly more items in the physical threat, social threat, and personal failure subscales. On the hostility subscale there was no difference between the anxious, depressed or community groups, with only the behaviour-disordered group having significantly higher scores. This result suggests that while anxious children have a higher frequency of negative thoughts, the content of negative thoughts does not differentiate them from depressed children. Other studies have, however, reported differences in cognitive content in anxiety and depression: children with depression report less positive views regarding self, the world, and the future, than children with anxiety (Stark, Humphrey, Laurent, Livingston, & Christopher, 1993).

In summary, studies investigating cognitive processing have demonstrated fairly consistent evidence for attentional and interpretational biases towards threat-related stimuli in children with anxiety. Such biases do not appear to be present in children with

depression. Evidence for maladaptive thoughts in children with anxiety is less consistent. Higher frequencies of negative thoughts have been established, as have higher frequencies of coping thoughts. However, the content of negative thoughts, as predicted by the cognitive content-specificity hypothesis, appears to be similar in children with anxiety and depression. These findings might be accounted for by a more general trait of negative affectivity. Due to high correlations between childhood symptoms of anxiety and depression, high co-morbidity rates, and causal links between the two disorders, a more global state of emotional distress might be related to maladaptive cognition in childhood (Cole, Peeke, Martin, Truglio, & Seroczynski, 1998; Ronan, Kendall & Rowe, 1994; Stark & Laurent, 2001). Further research is required to determine whether cognitive content in childhood is disorder-specific or whether it is associated with negative affect.

These results imply that adult cognitive models do not consistently represent the experiences of children with anxiety disorders. In addition, basing formulations and treatment approaches on adult models is not, at this time, good clinical practice as the theoretical foundations are questionable. However, these findings do not necessarily mean that maladaptive cognitions do not play a significant role in school-related difficulties.

Test anxiety and cognition

As highlighted previously, there is no literature relating directly to the role of cognition in school refusal. There have, however, been some empirical studies looking

at the role of cognition in school-related situations. For the most part, these studies have focused on aspects of test anxiety or evaluation anxiety.

One study has provided preliminary support for the presence of an attentional bias towards threat in children with high test-anxiety. Vasey, El-Hag, and Daleiden (1996) studied threat bias in a sample of non-referred children. Children were allocated to a high-test-anxious or low-test-anxious group according to their scores on a test-anxiety questionnaire. Physical and social threat words were used in a visual probe-detection task. Results indicated that high test-anxious children showed an attentional bias towards threat words. Similarly, high evaluation-anxious children endorse more cognitive errors in total than non-anxious peers on the total distortion score of the CNCEQ (Leitenberg, Yost, & Carroll-Wilson, 1986).

Further studies have looked at the type of cognitions in children with high, moderate, or low test-anxiety, during manipulated test-taking conditions (Prins, Groot, & Hanewald, 1994; Prins & Hanewald, 1997). High test-anxious children reported significantly more coping thoughts, off-task thoughts, and negative self-evaluations than either of the other groups. The high occurrence of coping thoughts was unexpected but the authors acknowledged that similarly high negative self-evaluations possibly influenced children's abilities to action any coping strategies. An optimal ratio between positive and negative cognitions may also be absent in high test-anxious children.

Negative self-evaluation and ability to cope with task demands have been highlighted, in these studies and others, as being a contributory factor in the maintenance of school-related anxiety. If cognitive models of anxiety predict that individuals with anxiety underestimate their ability to cope with perceived threat, then it is logical to

consider the extent to which self-efficacy beliefs contribute to anxiety and school-related difficulties in children. Self-efficacy refers to beliefs about one's ability to achieve a reasonable outcome in a given task (Bandura, 1977). Self-efficacy is situation-specific such that perceived ability to cope in one particular situation is not necessarily similar to perceived ability to cope in a different situation. Self-efficacy relating specifically to school situations (academic self-efficacy) has therefore received an increasing amount of attention in the educational literature (e.g. Bong & Skaalvik, 2003).

Muris (2002) provides substantial evidence in favour of links between self-efficacy and a range of anxiety-based disorders. Almost 600 adolescents, from a mainstream secondary school, completed measures of anxiety, depression, and self-efficacy. Muris' self-efficacy measure provides scores for social self-efficacy, academic self-efficacy, and emotional self-efficacy. A strong negative correlation was found between total self-efficacy and trait anxiety, anxiety symptoms, and depression symptoms, suggesting that lower self-efficacy is associated with higher levels of these emotional disorders. Furthermore, trait anxiety was most highly correlated with emotional self-efficacy, social phobia with social self-efficacy, and generalised anxiety with emotional self-efficacy. Interestingly, school phobia was moderately correlated with all measures of self-efficacy, but the correlation with academic self-efficacy was significantly greater than that of other anxiety disorders. This finding implies that children with school phobia have a notable lack of self-efficacy with regards to academic tasks in comparison to their peers, but are also characterised by low self-efficacy in other areas of their lives.

Although Muris has provided substantial evidence for the role of self-efficacy in anxiety disorders, the question of whether levels of self-efficacy remain constant over time cannot be answered by a cross-sectional design. A longitudinal study addresses this issue (Cole, Peeke, Dolezal, Murray, & Canzoniero, 1999). Data collated every six months, for a period of two years, was analysed using structural equation modelling. Results indicated that associations between negative affect and social and academic competence were stable over the two-year time-period. Negative affect also predicted self-perceived competence in the academic domain. Thus, without intervention, low self-efficacy is an enduring feature of children with negative affect.

One final study relating to self-efficacy in children that refuse school deserves attention. At the time of review, no other studies looking specifically at school refusal were identified. Having acknowledged the significant lack of assessment instruments in this area, Heyne et al. (1998) constructed and evaluated a short questionnaire for assessing self-efficacy in children that refuse school. Total scores and factors relating to efficacy associated with academic/social stress and separation/discipline stress provide an estimate of a child's ability to cope with a range of school-related situations. Overall, the self-efficacy levels reported by the school refusal sample varied considerably, with participants scoring items across the range from "really sure I couldn't cope" to "really sure I could cope". Heyne et al. explain the variance within their sample as being due to typical heterogeneity within the school refusal population. That said, without a control group, differences in the mean level of self-efficacy between school refusal groups and non-refusal groups could not be assessed. The results allow only limited conclusions to be drawn about the nature of self-efficacy in a school refusal population.

Summary

This review has highlighted evidence for processing biases and higher frequencies of negative thoughts in children with anxiety, but only partial support has been obtained for cognitive-specificity. Similar findings have also been established by studies looking specifically at test-anxiety. Without any research on samples of children that refuse school, it is difficult to argue that cognition is implicated in school refusal.

Given that cognitive models of childhood anxiety still require further research, that adult cognitive models receive only partial support in childhood populations, and that there remains a significant gap in the literature regarding cognition in school refusal; careful consideration must be given to the use of cognitive approaches in the treatment of school refusal. The current paucity of research in this area does not imply that cognitive approaches have no utility, but it does highlight to clinicians that a thorough functional assessment of school refusal and anxiety-related cognition is important prior to treatment selection. It cannot be disputed that further investigations into the links between cognition and school refusal would provide a theoretical framework for understanding this group of children and informing effective treatment practices.

Implications for Cognitive Therapy

Cognitive treatment approaches have received overwhelming support in the treatment of childhood anxiety disorders. With cognitive approaches being tailored specifically to the cognitive ability levels of children (Friedberg & McClure, 2002;

Friedberg et al., 2003; Kendall, 1990), efficacy has been demonstrated in terms of reductions in clinical symptoms, distress, and improvements in coping ability (e.g. Albano & Kendall, 2002; Lumpkin, Silverman, Weems, Markham, & Kurtines, 2002).

Until recently, there was actually very little evidence at all for the use of cognitive therapy in school refusal and that which did exist was confined solely to single-case designs (Kearney & Silverman, 1990, 1999; Moffit, Chorpita, & Fernandez, 2003). Single-case designs have utility in exploring the process of therapy and assessing treatment efficacy in an individual. However, as a single case is unlikely to be representative of the sample from which they were selected, it is unwise to generalise to the wider population. For this reason, only randomised controlled trials (RCTs) are evaluated in this paper.

The first RCT was undertaken by Last, Hansen, and Franco (1998). Fifty-six children (aged 6-17 years) with anxiety-based school refusal were randomly assigned to a 12-week cognitive-behavioural therapy (CBT) group or an attention-placebo control group. Cognitive behavioural therapy consisted of in-vivo exposure, homework assignments, and cognitive self-statement training. The placebo control group received psychoeducation, handouts, and homework tasks. Anxiety, depression, and school attendance were assessed at baseline, post-treatment, and 4-week follow-up. Statistical analyses revealed significant improvements on all measures for both groups, but no significant difference between the two groups at post-treatment or follow-up indicating that, although CBT was effective in the treatment of school refusal, it was no more efficacious than a supportive psychoeducational approach. The absence of a no-treatment control group, however, limits the reliability of these findings.

In another study, 34 children (aged 5-15 years) were randomly assigned to a CBT program or a waiting list control condition (King et al., 1998). The CBT program consisted of 6 individual sessions, undertaken over a 4-week period, and included relaxation training, imaginal and in-vivo exposure, and monitoring of self-talk. In addition, five parent training sessions were offered to this group. By the end of the intervention, the CBT group reported significant decreases in anxiety and depression, increases in self-esteem, as well as an increase in school attendance. In a three- to five-year follow-up telephone interview (King et al., 2001), 13 of the 16 families contacted reported continued school attendance. These findings do not, in fact, provide support for the use of CBT. The intervention, although described as cognitive-behavioural, consisted as much of parent training than of cognitive therapy. Also, without a placebo condition, positive changes might be reflective of non-specific therapy factors rather than those associated with cognitive therapy (Blagys & Hilsenroth, 2002).

More rigorous studies have investigated the efficacy of combined CBT and pharmacological treatment (imipramine) in the treatment of 63 adolescents with school refusal, anxiety and depression (Bernstein et al., 2000). School attendance improved significantly for children receiving imipramine and CBT but not for children receiving a placebo and CBT. However, both groups demonstrated significant improvements in mood. The researchers concluded that imipramine plus CBT is significantly more efficacious than CBT alone in improving school attendance and decreasing depression. In a one-year follow-up study, there was no significant difference between the groups on measures of anxiety or depression, or on clinical diagnoses of these disorders (Bernstein, Hektner, Borchardt, & McMillan, 2001). The researchers considered reasons for the

lack of group differences following the termination of therapy, and hypothesised that diagnoses such as Separation Anxiety Disorder were a developmental phenomena that remitted over time without the need for intervention, thus allowing the placebo group to achieve equal gains at one-year follow-up. There are, however, several limitations in generalising the follow-up results from this study. Importantly, 25 of the 31 participants interviewed at follow-up were from the imipramine plus CBT group, meaning that the success (or otherwise) of the placebo plus CBT intervention could not be adequately assessed. Also, the acquisition or remission of anxiety in these participants was not evaluated at group level, making it hard to judge whether the imipramine group relapsed over time, or whether the placebo group made significant clinical gains. Furthermore, as school attendance rates were not assessed at follow-up, the efficacy of CBT plus imipramine on school attendance is still unknown.

Heyne et al. (2002) undertook the most recent RCT, with 61 children aged 7-14 years. The comparative efficacy of child therapy (comprising of relaxation training, social skills training, cognitive therapy, and desensitisation), parent/teacher training, and combined therapies, was assessed at the end of an 8-session intervention and again at an 18-week follow-up. At post-treatment, significant improvements in anxiety, depression, and self-efficacy were noted in all three groups, although less change was seen in the child therapy group. At follow-up, there were no differences between the groups on any of the measures. Greater school attendance was achieved by children in the combined therapies group and the parent/teacher training group, suggesting that working with parents may result in more clinically significant gains than working with the child alone.

In summary, although CBT appears to be effective in the treatment of school refusal, at the present time results from controlled trials suggest that it does not appear to be more efficacious than parent training, psychoeducational, or pharmacological approaches. Research studies report improvements in terms of mood but there is little evidence for improvements in school attendance. These findings contradict outcomes predicted by cognitive theories of anxiety (Beck, Emery, & Greenberg, 1985; Clark, 1999; Mogg & Bradley, 1998) as current research findings suggest that modifying cognitive errors and increasing self-efficacy do not have consistent clinical utility in this group of children.

Many factors may have contributed to the conflicting results in the literature discussed in this paper. Most pertinent, perhaps, is the fact that school refusal is a heterogeneous phenomenon and that the behaviour serves a different function for each individual child (e.g. Kearney & Silverman, 1993). Thus, even if RCTs group children according to similarities in anxiety diagnosis, a prescriptive/standard treatment approach to school refusal is unlikely to be effective for every child. Individual differences in treatment outcome that result from allocation to a standard treatment approach are likely to have an affect on overall group outcome results. Other authors have demonstrated that allocation to treatment approaches not based on an individual functional assessment results in poorer outcome (Kearney & Silverman, 1999). In addition, despite the potential applicability of cognitive therapy to childhood disorders, developmental differences exist between the cognitions of 5-year-olds and 17-year-olds (Rosser, 1994; Vasey & Dadds, 2001), but RCTs have utilised samples of children across the entire age range. The reasons that children refuse school and the length of time in which they have

had difficulties are also major factors in determining treatment outcome (Kearney, Pursell, & Alvarez, 2001; King & Ollendick, 1989; Last, Hansen, & Franco, 1998), as are school-related issues such as bullying, teachers, and lessons (Malcolm, Wilson, Davidson, & Kirk, 2003), parent physical health or mental health (Klerman & Glasscock, 1996; McShane, Walter, & Rey, 2001), family dynamics (Bernstein & Borchardt, 1996), and co-morbid childhood psychological difficulties (Berg, 1992). In cases where multiple factors are implicated in school refusal, a multi-faceted approach (that incorporates cognitive and family-based approaches) may be indicated (Kearney, Pursell, & Alvarez, 2001).

This review has highlighted that, at the present time, no studies have adequately addressed the role of cognition in school refusal difficulties. Until further research takes place, it is difficult to conclude whether or not maladaptive cognition is a significant factor in the cause or maintenance of school refusal. Furthermore, the modification of cognition, as an effective treatment component for school refusal, has yet to be demonstrated given that pure cognitive therapy (as distinct from cognitive-behavioural therapy) has not been assessed in a large-scale clinical trial. Further research would have value in helping to establish a theoretical basis for the role of cognition in school refusal, and in ascertaining whether cognitive therapy has clinical utility in this population of children. With these issues in mind, practitioners should consider the use of cognitive therapy in children who refuse school only after conducting a thorough functional assessment of clinical anxiety and maladaptive cognition, whilst a more substantial evidence-base and clinical practice guidelines are being established.

Précis

Prevalence data from educational sources and the clinical literature demonstrate that school refusal is a significant societal problem. School refusal refers to child-motivated non-attendance that is typically accompanied by some degree of anxiety or distress, and occurs with parental knowledge. School refusal occurs equally in boys and girls, across the age-range, but increases have been noted at 7 and 11 years of age. Children refuse school for many different reasons, including emotional difficulties, bullying, and academic difficulties. Risk factors such as parent mental health, family dynamics, and psychological disorders, also impact on school refusal behaviour. The long-term outcomes of children with anxiety and school refusal are of particular concern.

School refusal is typically associated with anxiety but the way in which these difficulties are linked is still unclear. Research clearly demonstrates that trait and test anxiety are associated with interpretative and attentional biases towards threat, and increases in negative thoughts and coping self-statements. There is less consistent evidence for cognitive specificity in children's anxiety problems. Low perceived self-efficacy also appears to be implicated in anxiety. Although cognition might be a factor that links these two phenomena, there is as yet no research evidence to support this hypothesis.

Although no theoretical links have been established with regards to the relationship between school refusal and cognition, cognitive therapies are frequently offered to this group of children. Randomised controlled trials have indicated that CBT

is effective, but is no more efficacious than other therapeutic approaches. Improvements in mood have been observed but there is no consistent evidence regarding increased school attendance. Several factors might explain these findings, but most importantly the lack of a theoretical basis for cognitive therapies in this group of children has implications for the future treatment planning. Future research should therefore aim to establish the role of anxiety and cognition in school refusal, and provide a theoretical basis for the future treatment of children with school refusal.

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Empirical Paper

Anxiety, Automatic Thoughts, and Perceived Self-efficacy in School Refusal

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Running head: ANXIETY AND COGNITION IN SCHOOL REFUSAL

This paper has been prepared for submission to The Journal of Child Psychology and Psychiatry (see Appendix B for instructions to authors).

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Abstract

Background: Cognitive models of anxiety have been used as a basis for understanding school refusal, and imply that maladaptive cognition is a causal or maintaining factor in school refusal difficulties. A number of studies have reported increased attentional and interpretative biases, and more frequent negative thoughts and coping cognitions, in anxious children. However, at present there is no empirical evidence to support the role of cognition in school refusal. This paper explores the roles of anxiety, automatic thoughts, and self-efficacy in adolescents who refuse school. **Method:** A between-groups design was used to explore whether adolescents who refused school differed from a control group, on measures of anxiety, automatic thoughts, and self-efficacy. Relationships between anxiety and measures of cognition were also explored. **Results:** There were no significant differences between the groups on measures of anxiety, automatic thoughts, or self-efficacy. However, clinical levels of automatic thoughts were more frequent in the school refusal group. Positive correlations were established between anxiety and each of the measures of cognition. **Conclusions:** The results suggest that school refusal difficulties are not necessarily characterised by patterns of maladaptive thought. Rather, maladaptive cognition is more likely to be associated with levels of anxiety. This has implications for the use of cognitive-behavioural therapy in adolescents who refuse school. **Keywords:** School refusal; Adolescents; Anxiety; Automatic thoughts; Self-efficacy; Cognitive-behavioural therapy.

Introduction

With 6.13% of pupils absent from school each day in the United Kingdom (DfES, 2003b), and with ever-increasing legal and educational sanctions for persistent non-attendance (DfES, 2002, 2003a), the issue of school refusal has become a popular topic of debate in the current research literature. Although school refusal is by no means a new phenomenon, only recently have researchers begun to explore the causal and maintaining factors in school refusal. For this reason, interventions and services available to these children have often been inadequate.

Kearney has defined school refusal as, "...child-motivated refusal to attend school or difficulty remaining in classes for an entire day" (2002, p.235). It is also agreed that school refusal consists of severe difficulties in attending school, severe emotional upset, parental knowledge of absenteeism, and an absence of anti-social and behavioural disorders (Berg, Nichols, & Pritchard, 1969). Berg and his colleagues argue that truancy is distinct from school refusal, although more recent research disputes these claims (e.g. Bools, Foster, Brown, & Berg, 1990; Egger, Costello, & Angold, 2003). It is clear, however, that school refusal should not be confused with cases of parental withdrawal from education (i.e. if a parent is dissatisfied with their child's schooling), or with cases of pupil exclusion from school that typically result from ongoing difficulties in pupil conduct.

School refusal is a significant problem. A prevalence rate of 1.6% has been established for anxious school refusal in a large community sample of children (Egger, Costello, & Angold, 2003). Similar prevalence rates have been quoted in previous

reviews, with 1-2% of the general population and up to 5% of the clinical population presenting with school refusal (Berg, 1992; King & Bernstein, 2001; Murphy & Wolkind, 1996). School refusal is equally common in boys and girls (King & Bernstein, 2001) and research has shown that sex is not a significant predictor of school refusal behaviour (Hansen, Sanders, Massaro, & Last, 1998). It has also been suggested that school refusal is more likely to occur in the youngest child of a family (Bernstein & Borchardt, 1996). In addition, school refusal appears to be most common during significant points of transition, such as changing schools at 7 and 11 years of age (King & Bernstein, 2001).

There have been numerous studies looking at risk factors in the development of school refusal difficulties. Associations have been made between school refusal and parental mental health problems (Martin, Cabrol, LePine, & Mouren-Simeoni, 1999), family dynamics (Bernstein & Borchardt, 1996; Bernstein, Svingen, & Garfinkel, 1990; Kearney & Silverman, 1995), and childhood psychological disorders (Berg, 1992; McShane, Walter, & Rey, 2001; Werry, 1996). Anxiety, particularly, has frequently been implicated in school refusal behaviour (Egger, Costello, & Angold, 2003; Flakierska-Praquin, Linstrom, & Gillberg, 1997; Last & Strauss, 1990).

School refusal is also a serious problem: legally, educationally, and psychologically. From a legal perspective, under the 1996 Education Act parents are responsible for securing their child's attendance at school. If parents do not fulfil their legal responsibility, the Local Education Authority can take legal action including a fine of up to £2,500, a parenting order, or a custodial sentence (DfES, 2002, 2003a). Educationally, research demonstrates that school refusal can result in poor academic

performance, fewer opportunities for higher education or employment, and reduced opportunities to socialise with same-age peers (Malcolm, Wilson, Davidson, & Kirk, 2003). Longitudinal research has also shown that men who previously did not attend school were more likely to have unskilled manual jobs, were less likely to have completed examinations, had an unstable job record, and were more likely to commit criminal offences (Farrington, 1996). The long-term psychological outcome of children that refuse school is also apparent. Research has demonstrated that anxiety and depression associated with school refusal continue not only into adolescence (Bernstein, Hektner, Borchardt, & McMillan, 2001; Buitelaar, van Andel, Duyx, & van Strien, 1994) but into adulthood as well (Flakierska-Praquin, Lindstrom, & Gillberg, 1997). School refusal difficulties also show intergenerational continuity, as mothers of children that refuse school often had school refusal difficulties during their own childhood (Last & Strauss, 1990).

There is an emphasis in the current literature on identifying the motivating reasons for school refusal. Common reasons for non-attendance cited in the literature include emotional difficulties, academic ability, bullying or peer pressure, physical health concerns, caring for a family member, the school environment, boredom, particular lessons or teachers, social isolation, tests, and parental attitude to education (Klerman & Glasscock, 1996; Malcolm, Wilson, Davidson, & Kirk, 2003; Place, Hulsmeier, Davis, & Taylor, 2000; Wright & Wardle, 1996). Functional models have been utilised as a way of understanding the many reasons cited for school refusal. One such model has defined four motivating functions of school refusal: "avoidance of stimuli provoking negative affectivity", e.g. tests; "escape from aversive social

situations", e.g. speaking in front of the class; "attention from significant others"; and "tangible reinforcement", e.g. playing with friends (Kearney, 2002; Kearney & Albano, 2004; Kearney & Silverman, 1990,1993). Children that rate highly on items in the first or second functional categories primarily refuse school for reasons of negative reinforcement, such that avoidance of a stimulus serves to reduce distress. Children that refuse school on the basis of factors in the third or fourth categories, do so for reasons of positive reinforcement, such as obtaining parental attention or enjoying an activity serves as a reward for not attending school. An assessment measure, based on these functional categories, has been validated as an effective way of determining the main function of school refusal for an individual child (Higa, Daleiden, & Chorpita, 2002; Kearney, 2002; Kearney & Silverman, 1993).

Cognitive behavioural therapy (CBT) has often been chosen as an intervention in cases of negative reinforcement (Kearney, Pursell, & Alvarez, 2001; Kearney & Silverman, 1999), where anxiety is typically a motivating function of school refusal behaviour. However, randomised controlled trials have produced conflicting results regarding the efficacy of CBT in this group of children. Research has shown that CBT is effective for improving symptoms of anxiety and depression in children who refuse school (Bernstein et al., 2000; Heyne et al., 2002; King et al., 1998; Last, Hansen, & Franco, 1998), but improved school attendance has only been demonstrated in a few studies (Heyne et al., 2002; King et al., 1998; Last, Hansen, & Franco, 1998) and therapeutic gains have not been reliably demonstrated in long-term follow-up studies (Bernstein, Hektner, Borchardt, & McMillan, 2001; Heyne et al., 2002). More importantly, although CBT appears preferable to no treatment (King et al., 1998), it is no

more efficacious than a psychoeducational approach (Last, Hansen, & Franco, 1998) or a parent training intervention (Heyne et al., 2002).

The theoretical basis for CBT in this group of children provides clues to the inconsistent findings in the treatment literature. Cognitive models posit that maladaptive cognitions are a causal or maintaining factor in emotional disorders (Beck, 1976; Beck, Emery, & Greenberg, 1985). Furthermore, the *cognitive content-specificity hypothesis* (Beck, Brown, Steer, Eidelson, & Riskind, 1987) predicts that unique patterns of cognitive errors differentiate the various psychological disorders. Cognitive models of anxiety from the adult literature (e.g. Beck, Emery, & Greenberg, 1985; Clark, 1999; Mogg & Bradley, 1998) have been adapted to understand childhood anxiety. Cognitive models assume that individuals with anxiety have an exaggerated perception of threat and danger, and that these individuals underestimate their ability to cope with the perceived threat (Beck, 1976). There is ample evidence in the adult literature to support these assumptions (e.g. Fox, Russo, & Dutton, 2002; Mathews & MacLeod, 2002; Mogg & Bradley, 1998) but evidence in the child literature is less consistent.

Questionnaires are one method of assessing cognition, and typically require the child to endorse items relating to particular thoughts or self-statements. Frequently cited measures include the Children's Negative Cognitive Error Questionnaire (CNCEQ; Leitenberg, Yost, & Carroll-Wilson, 1986), the Children's Anxious Self-Statement Questionnaire (NASSQ; Ronan, Kendall, & Rowe, 1994), and the Children's Automatic Thoughts Scale (CATS; Schniering & Rapee, 2002). Questionnaires are a popular tool in research as they are easy to administer and score, and are often validated, reliable, sensitive to change, and replicable across studies. Of course, there are limitations

associated with the use of questionnaires as a measure of cognition. Items on a questionnaire may not be representative of a child's actual thoughts; responses might be influenced by re-appraisal, selective memory, or demand characteristics; and the salience of a particular thought cannot be easily assessed (Glass & Arnkoff, 1997; Kendall & Chansky, 1991). Furthermore, items do not necessarily represent an enduring cognitive style (Leitenberg, Yost, & Carroll-Wilson, 1986). Production methods (whereby the child reports or writes down thoughts during a specific task) overcome some of these limitations but are significantly influenced by state anxiety and demand characteristics (Kendall & Chansky, 1991). It has therefore been argued that questionnaire methods are the most reliable and the most popular means of assessing cognition in childhood anxiety (Glass & Arnkoff, 1997; Kendall & Chansky, 1991).

Results from studies investigating negative thoughts and self-statements in anxious children have been inconsistent. Cognitive errors (catastrophising, overgeneralisation, personalising, and selective abstraction; Beck, 1976) are associated with anxiety in children (Weems, Berman, Silverman, & Saavedra, 2001), and negative thoughts (Rietveld, Prins, & van Beest, 2002; Ronan, Kendall, & Rowe, 1994) as well as coping thoughts (Kendall & Chansky, 1991; Prins & Hanewald, 1999) appear to occur with higher frequency in high-anxious children. However, evidence for cognitive-specificity is less consistent. Some studies have reported differences in the types of thoughts reported by children with anxiety or depression, with less positive views regarding self, the world, and the future, occurring in children with depression (e.g. Stark, Humphrey, Laurent, Livingston, & Christopher, 1993). Others studies report no such differences, demonstrating that both children with anxiety *or* depression endorse

significantly more items relating to physical threat, social threat, or personal failure (Schniering & Rapee, 2002). Some researchers do not distinguish childhood anxiety from depression due to commonalities in symptom presentation, and instead refer to a more global state of emotional distress known as negative affectivity (Cole, Peeke, Martin, Truglio, & Seroczynski, 1998; Ronan, Kendall & Rowe, 1994; Stark & Laurent, 2001). Negative affectivity might explain similarities in the cognitive content of these groups of children.

Perceived ability to cope with an anxiety-provoking stimulus has also been assessed by some researchers. Self-efficacy is negatively correlated with anxiety and depression, suggesting that lower self-efficacy is associated with higher levels of emotional disorder (Muris, 2002). This is consistent with adult models of anxiety.

The links between anxiety, cognition, and school refusal are less well defined. Studies identifying the presence of anxiety in school refusal have reported rates of up to 100%, but estimates vary according to the samples of children used in each study (Bernstein, Svingen, & Garfinkel, 1990; Buitelaar, van Andel, Duyx, & van Strien, 1994; Egger, Costello, & Angold, 2003; Flakierska-Praquin, Lindstrom, & Gillberg, 1997; Kearney & Albano, 2004; Last & Strauss, 1990; McShane, Walter, & Rey, 2001). In addition to prevalence rates, some studies have reported the degree to which anxiety and school refusal are associated. In one study, children that refuse school were reported to be 11 times more likely to have a diagnosis of separation anxiety disorder or simple phobia compared to their peers (Egger, Costello, & Angold, 2003), but another study found no such relationship between anxiety and absenteeism (Hansen, Sanders, Massaro, & Last, 1998). There is an absence of research looking at links between

cognition and school refusal. Two studies suggest that low perceived self-efficacy may be a factor in school refusal (Heyne et al., 1998; Muris, 2002), but there is currently no research evidence for a direct association between school refusal and maladaptive thoughts. This does not, however, necessarily mean that maladaptive thoughts do not play a significant role in school refusal. Further research is necessary to determine whether there is a specific pattern of cognition associated with school refusal behaviour.

It is evident from this discussion that a clear understanding of the role of cognition in school refusal is still required. Without this knowledge, the use of CBT in this group of children lacks a theoretical underpinning, and may continue to be no more efficacious than other available therapies. The aim of this study is to explore the nature of school refusal in a sample of adolescents and determine whether anxiety, frequency and type of negative automatic thoughts, and level of perceived self-efficacy, differentiate this school refusal group from a control group of adolescents who regularly attend school. In addition, associations between anxiety and cognition will be explored. Four hypotheses were established. Firstly, adolescents who refuse school will have higher levels of anxiety than adolescents who attend school. Secondly, adolescents who refuse school will have more frequent negative automatic thoughts than adolescents who attend school, and these negative thoughts will focus on physical threat, social threat, and personal failure. Thirdly, adolescents who refuse school will report lower self-efficacy than adolescents who attend school. Lastly, there will be positive correlations between anxiety and negative thoughts relating to threat and personal failure, and negative correlations between anxiety and self-efficacy ratings. It is hoped that the

results from this study will raise issues pertinent to the future provision of CBT for adolescents who refuse school.

Method

Design

The initial investigation was exploratory in design, aiming to describe the sample in terms of the function of school refusal, degree of anxiety, frequency and type of automatic thoughts, and perceived self-efficacy.

A between-groups design was employed to determine whether degree of anxiety, frequency and type of automatic thought, and perceived self-efficacy could distinguish a school refusal group from a school attendee group. In addition, correlational analyses were employed to determine associations between anxiety, automatic thoughts and perceived self-efficacy across the whole sample.

Participants

This study was subject to the approval of the School of Psychology Ethical Committee, University of Southampton (see Appendix C). In order to obtain a representative sample of adolescents and to minimise expected difficulties in recruitment, permission to undertake the study was sought from managers of school

refusal services and head teachers of mainstream high schools in North and West Wiltshire, and Luton, Bedfordshire.

The researcher met with head teachers, heads of pupil welfare, and education welfare officers from two school refusal services and one mainstream high school in Wiltshire, plus once school refusal service and two mainstream high schools in Luton. The purpose of the study, its inclusion/exclusion criteria, and the recruitment process were discussed in detail. These "link" members of staff then approached parents and adolescents through their usual contact with educational services, e.g. home tuition. In total, 152 parents were approached with regard to the study. Figure 1 summarises the selection process.

One hundred and four parents were approached because their child currently refuses to attend school. Adolescents were included in the study if they were receiving (or had previously received) mainstream education services, refused to attend school or had difficulty remaining in classes for an entire day, and did so with the knowledge of their parents. Adolescents were not included if non-attendance was due to anti-social behaviour or truancy, they were permanently excluded from education, or if parents had willingly withdrawn them from education. Sixteen parents initially gave consent for their children to take part, yielding a response rate of 15.4%. Two of these families subsequently dropped out of the study.

Forty-eight parents were approached because their child attends school regularly. Adolescents were included in the school attendee group if they were receiving full-time mainstream education and there was no known history of school refusal or exclusion.

Fourteen parents gave consent for their children to take part, yielding a response rate of 29.2%.

Figure 1.

Flow-chart depicting selection of participants.

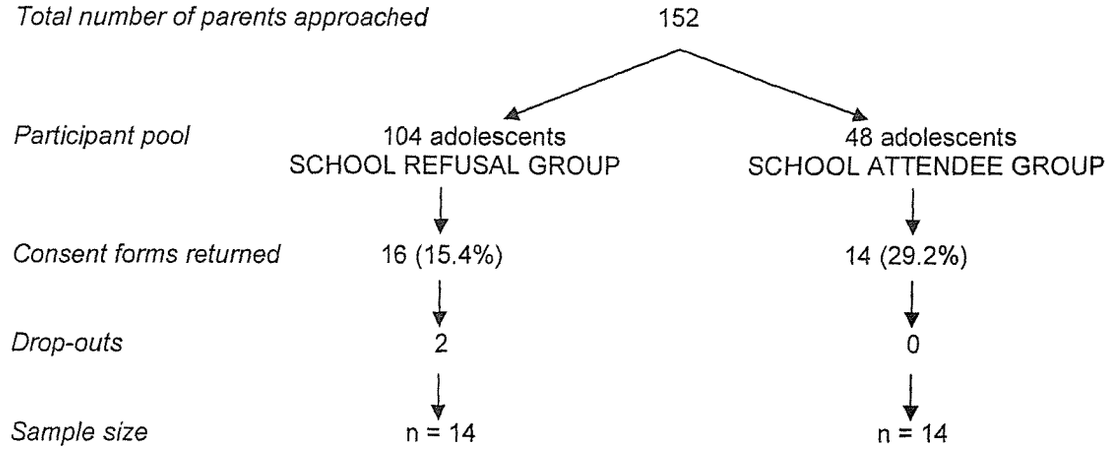


Table 1 displays participant characteristics by group. The school refusal group consisted of a non-clinical sample of 14 adolescents, recruited through school refusal services and mainstream high schools in North and West Wiltshire (n = 3), and Luton, Bedfordshire (n = 11). The sample consisted of 13 males (93%) and 1 female (7%), with a mean age of 14;6 years (range = 12;10 – 16;4). Nine of the adolescents were Caucasian (64%) and 5 were of Asian background (36%). Within this group, 1 participant attended a specialist school refusal service, 3 participants received home tuition, 8 received some form of secondary school-based education, and 2 had no current educational service provision. The school attendee group consisted of 14 adolescents

recruited through two mainstream secondary schools (one in West Wiltshire and one in Luton). The sample consisted of 9 males (64%) and 5 females (36%), with a mean age of 14;4 years (range 12;11 – 16;8). Eight of the adolescents were Caucasian (57.1%), 5 were of Asian background (35.7%), and 1 was of mixed race (7.1%).

Table 1.

Participant characteristics defined by group.

		School Refusal Group (n)	School Attendee Group (n)
Sex	Male	13	9
	Female	1	5
Ethnicity	Caucasian	9	8
	Asian	5	5
	Mixed Race	0	1
Diagnoses	Depression	1	0
	Depression & Anxiety	1	0
	Anorexia	1	0
	Asthma	1	0
	None	10	14
Age (mean)		14;6 years	14;4 years

Measures

School Refusal Assessment Scale-Revised (SRAS-R; Kearney, 2002). The SRAS-R is a modified version of the SRAS (Kearney & Silverman, 1993). This 24-item measure is designed to assess the primary function (or reason for) school refusal behaviour. Kearney and Silverman have identified four functional conditions of school

refusal: "avoidance of stimuli that provoke negative affectivity", "escape from aversive social and/or evaluative situations", "pursuit of attention", and "pursuit of tangible reinforcement". All items are rated on a 0-6 Likert-type scale and scores for each functional condition are obtained. A mean score for each condition is then calculated (dividing each score by 6 items). Kearney and Silverman have suggested that if a functional condition differs from other conditions by more than 0.25 points, this is considered the primary function for school refusal. In cases where the mean scores do not differ significantly from each other, multi-function school refusal is considered. Child and parent versions of this measure are available, allowing comparisons to be made between the two informants. Test-retest reliability for items on the SRAS-R range from $r = .47$ to $r = .86$ on the child version and $r = .41$ to $r = .87$ on the parent version (Kearney, 2002). Whilst some items have low test-retest reliability, the SRAS-R is arguably a more reliable measure than the original scale (Kearney & Silverman, 1993), which had re-test correlations ranging from $r = -.06$ to $r = .91$ (child version) and $r = .26$ to $r = .85$ (parent version). There is also good concurrent validity with the original version of the scale ($r = .56$, .73, .77, and .68 for each of the functional conditions; Kearney, 2002). To date, this measure has only been standardised on a US population, but its use as a functional assessment tool has utility in clinical and research settings in the UK (e.g. Place, Hulsmeier, Davis, & Taylor, 2000).

Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1994). The RCMAS is a 37-item self-report scale designed to measure trait anxiety in children and adolescents aged 6 to 19 years. For each item the child must respond by circling "Yes" (if the item describes his or her experience) or "No" (if the item does not

describe his or her experience). The measure yields a Total Anxiety score as well as subscale scores for Physiological Anxiety, Worry/Oversensitivity, and Social concerns/Concentration. Normative data are available based on age, sex and ethnicity, with T-scores higher than 60 representing clinical concern. Reynolds and Richmond (1994) have provided data on the psychometric properties of the RCMAS. The RCMAS has good internal consistency with alpha values of .83 and .85, test-retest reliability (r = .68), and has a high correlation (r = .85) with the trait scale of the State Trait Anxiety Inventory for Children (STAIC; Spielberger, 1973). Standardised scores are based on large studies of clinical and non-clinical populations in the US. Although norms are not available for a UK population of children, the RCMAS is a valuable assessment tool (given the lack of a British alternative) and is commonly used in empirical studies of this nature (e.g. Dineen & Hadwin, 2003).

Children's Automatic Thoughts Scale (CATS; Schniering & Rapee, 2002). The CATS is a 40-item self-report measure designed to assess a wide range of negative self-statements in 7 to 16 year olds. Children are asked to rate how often they have experienced each thought over the past week. Scores range from 0 (not at all) to 4 (all the time), resulting in a maximum total score of 160. As well as the total score, factor analytic studies have yielded four distinct cognitive factors relating to physical threat, social threat, personal failure, and hostility. Each factor has a clinical cut-off score based on sex and age (Schniering & Rapee, 2002, 2004). Internal consistency for the CATS is high across all of the items (α = .95) as well as the subscales (α = .85, .92, .92, and .85, respectively). Test-retest reliability has been demonstrated at one month (r = .79) and three months (r = .76), and the CATS also has discriminant validity across

community, clinically anxious, clinically depressed, and behaviour-disordered children (Schniering & Rapee, 2002). The quality of the CATS as an assessment tool is reflected by its validity and reliability estimates but, again, standardisation was based on Australian and not British samples of children.

Self-Efficacy Questionnaire for School Situations (SEQSS; Heyne et al., 1998). The SEQSS was designed for children, aged 5 to 15 years, who refuse school. The questionnaire assesses cognitions by asking children to rate their perceived ability to cope with 12 school situations on a 5-point Likert scale. Total scores range from 12 to 60, with a higher score representing higher self-efficacy. Heyne et al. (1998) propose a 2-factor structure, with 6 items loading onto an academic/social stress factor and 6 items loading onto a separation/discipline stress factor. Internal consistency ($\alpha = .85$) and test-retest reliability ($r = .90$) have been demonstrated. The SEQSS was validated on an Australian sample of children, but had ample face-validity for inclusion in this research. For the purposes of the present study, the wording was modified on two of the items to make them more appropriate for a UK sample of children (*principal* was changed to *head teacher*, and *growled at* was changed to *told off*).

Birleson Depression Scale (Birleson, Hudson, Buchanan, & Wolff, 1987). This is an 18-item self-rating scale designed to assess the degree of depressive feelings in children and adolescents (from 8 years upwards). Items are scored as 0, 1, or 2, yielding a maximum total score of 36. A clinical cut-off score of 15 reliably discriminates between depressed and non-depressed children (Birleson, Hudson, Buchanan, & Wolff, 1987). Normative data, obtained from UK samples of children, is available based on age and sex (Yule, Ollendick, & Blagg, 1992). The measure has been demonstrated to be of

sufficient quality for clinical and research purposes, with good test-retest reliability estimates of $r = .80$ and internal consistency estimates of $\alpha = .86$.

Procedure

Members of staff in each of the educational services distributed a consent pack (containing an information letter, consent form and demographic information sheet; see Appendix D) and the SRAS-R (parent version) to the parents of each child meeting the study criteria. Parents were asked to return the consent from, information sheet, and questionnaire to the educational service or professional involved, in the envelope provided. The researcher was notified when consent forms had been returned and subsequently contacted parents in order to arrange an individual session with each participant. Twenty-one participants attended a session within the referring educational service. The remaining 7 participants were seen at their home, as the nature of their difficulties prevented attendance at the referring educational service.

The researcher met with each participant in a quiet room. At the start of the session, introductions were made and the participant was given an opportunity to ask questions. Each participant signed a consent form if they agreed to take part in the study (Appendix E). Participants were reassured that they may leave the room and withdraw from the study at any time.

Participants in the school refusal group were administered the SRAS-R, CATS, SEQSS, and Birleson Depression Scale in a counterbalanced order, followed by the RCMAS (this was to reduce the possibility of state anxiety, resulting from the testing situation, influencing the trait anxiety score). Participants in the school attendee group

underwent the same procedure but did not complete the SRAS-R. The researcher read aloud the standard instructions for each questionnaire and checked that each participant understood and was able to complete each measure. Completion of all five questionnaires took an average of 30 minutes. At the end of the session participants were thanked and debriefed.

Data Analysis

Frequencies and descriptive data were used to explore the length of time participants had been refusing school and the function of school refusal in this sample, as reported by the participants and their parents. Consideration was given to the agreement between the two raters. Further to this, correlational analyses were used to explore the relationship between anxiety and each of the four functional conditions of school refusal.

The role of anxiety was explored. Frequency data were used to determine the number of participants scoring above the clinical cut-off on the RCMAS. Differences between the school refusal group and school attendee group were then explored using a one-way ANCOVA, with anxiety total score as the dependent variable and depression as the covariate.

The role of cognition was then considered. Group differences in the frequency and type of automatic thoughts were explored using an independent samples t-test for the CATS total score, and Mann-Whitney U tests for subscale scores. Differences in perceived self-efficacy were analysed using independent samples t-tests.

Lastly, the relationship between anxiety and cognition was explored across the total sample. Partial correlations (with depression as the covariate) were employed to determine the degree to which automatic thoughts and perceived self-efficacy were associated with anxiety.

The lack of previous empirical research on cognition in school refusal meant that adequate power analyses could not be undertaken prior to data collection. Estimates of required sample size and effect size are, therefore, not available for this study. The following results should, therefore, be interpreted with the issues of sample size and effect size in mind. These issues are addressed in more detail in the discussion.

Results

The Kolmogorov-Smirnov test of normality and Levene's test for equality of variances were undertaken to establish whether the data met the assumptions for parametric statistics (Appendix F). Non-parametric statistics were selected in cases where these assumptions were not met.

Equivalency of Groups

Preliminary analyses were conducted to determine whether the two groups were equivalent in terms of age, sex, ethnicity, and known physical or psychological problems.

A t-test revealed no significant differences in age ($t(26)=.43$, $p=.67$). Statistical tests could not be employed in the analyses of the remaining variables as minimum cell frequency was violated in chi-square analyses. Frequency data pertaining to participant characteristics revealed small differences in the ratio of male to female participants, with more females present in the school attendee group. Given that the literature reports no expected sex differences in adolescents that refuse school (e.g. King & Bernstein, 2001), sex was not considered as a factor in further analyses. There were no differences in ethnicity between the two groups. Four participants in the school refusal group had diagnosed physical or psychological difficulties, whereas none of the school attendee group had such difficulties.

Descriptive Data

Table 2 displays the means and standard deviations for the school refusal group, school attendee group, and the total sample. Differences between group means are analysed below.

Table 2

Mean questionnaire scores for school refusal and school attendee groups.

	School Refusal Group		School Attendee Group		Total Sample	
RCMAS total score[a]	11.07	(7.47)	8.93	(6.40)	10.00	(6.86)
CATS total score[b]	38.86	(25.97)	23.79	(18.24)	31.32	(23.32)
CATS physical subscale[b]	6.36	(7.27)	3.71	(3.38)	5.04	(5.73)
CATS social subscale[b]	8.86	(9.24)	6.36	(6.33)	7.61	(7.88)
CATS personal subscale[b]	8.71	(9.29)	4.36	(4.80)	6.54	(7.59)
CATS hostility subscale[b]	14.93	(6.83)	9.36	(7.43)	12.14	(7.56)
SEQSS total score[c]	44.36	(10.78)	49.93	(6.03)	47.14	(9.03)
SEQSS academic subscale[c]	20.57	(6.04)	23.86	(3.72)	22.21	(5.20)
SEQSS separation subscale[c]	23.79	(5.34)	26.07	(3.00)	24.93	(4.41)
Birleson total score[d]	12.07	(6.90)	7.50	(6.09)	9.79	(6.80)

Note. Standard deviations are indicated in parentheses. [a] Higher RCMAS scores = higher levels of trait anxiety. [b] Higher CATS scores = higher frequency of negative thoughts relating to physical threat, social threat, personal failure, and hostility. [c] Higher SEQSS scores = higher perceived self-efficacy. [d] Higher Birleson scores = higher levels of depression.

Exploring School Refusal

Parents of participants in the school refusal group reported the length of time during which their child had presented with difficulties in attending school. There was wide variation in the sample, with reports ranging from one month to five years ($M = 19$ months). The mean age of onset in this sample was 12 years; 11 months (range = 11;4 - 14;11). Given that the length of time in which participants had been refusing school

might impact on the validity of further analyses, preliminary correlational analyses were undertaken to determine whether this variable should be partialled out during statistical analyses. Spearman's correlation co-efficients revealed no relationship between time with school refusal and the CATS total score (r=-.01, p>.05), a weak relationship with the CATS physical subscale (r=.18, p>.05), no relationship with the CATS social subscale (r=-.03, p>.05), no relationship with the CATS personal subscale (r=.04, p>.05), and no relationship with the CATS hostility subscale (r=.08, p>.05). Weak correlations were found between time with school refusal and SEQSS total self-efficacy (r=.13, p>.05), academic self-efficacy (r=.23, p>.05), and separation self-efficacy (r=.10, p>.05). There was no association between time with school refusal and RCMAS trait anxiety (r=.07, p>.05). The decision was therefore made to not include time with school refusal in any further analyses.

Physical or psychological problems were reported to be present in four of the participants. Parents reported diagnoses of asthma, anorexia, depression, and comorbid anxiety and depression. These participants were excluded from some of the analyses. Nine parents chose to comment on their child's main reason for non-attendance (Appendix G). Within this small sample of adolescents, reasons for school refusal included anorexia, low self-esteem, the school environment, depression, and bullying.

The main function of school refusal (avoidance, escape, attention, tangible reinforcement) was ascertained using the SRAS-R. Based on scores from the parent version of the SRAS-R, four participants fell into the avoidance category, three fell into the attention category, and six fell into the tangible reinforcement category. One parent did not return the questionnaire. Scores from the child version indicated that three

adolescents fell into the avoidance category, seven fell into the tangible reinforcement category, and four refused school for multiple reasons. There was a 54% agreement rate between participant and parent reports in the 13 complete sets of data (see Table 3 for a summary).

Table 3.

Total number of participants falling into each of the functional categories of the SRAS-R (based on parent and adolescent ratings).

SRAS-R	SRAS-R Parent Version					
Child Version	Avoidance	Escape	Attention	Tangible	Multiple	*Total*
Avoidance	2*	-	1	-	-	3
Escape	-	-	-	-	-	0
Attention	-	-	-	-	-	0
Tangible	1	-	1	5*	-	7
Multiple	1	-	1	1	-	3
Total	4	0	3	6	0	13

Note. Avoidance = avoidance from stimuli that provoke negative affectivity
Escape = escape from aversive social and/or evaluative situations
Attention = pursuit of attention
Tangible = pursuit of tangible reinforcement
* denotes agreement between parent and child ratings

Exploration of the relationship between each of the functional conditions of school refusal and anxiety was undertaken using partial correlations. The mean scores from each of the functional conditions on the SRAS-R (child version) and total anxiety scores were employed in the analyses, with depression as the covariate. Positive

correlations were found between anxiety and each of the functional conditions. Large associations were found between anxiety and avoidance (r=.54, p=.05), and anxiety and tangible reinforcement (r=.63, p=.15). A moderate correlation was observed between anxiety and attention (r=.43, p=.15), and a weak correlation was observed between anxiety and escape (r=.27, p=.38). For this sample of adolescents, high anxiety is therefore associated with high scores in the categories of "avoidance of stimuli that provoke negative affectivity", "pursuit of attention", and "pursuit of tangible reinforcement". In the literature, anxiety is not typically associated with the "pursuit of tangible reinforcement" but is normally associated with "escape from aversive social situations" (e.g. Kearney & Albano, 2004). It is unclear why the correlations in the current study differ from those in the literature, although it might be the case that spurious correlations have occurred due to the small sample size.

Exploring the Role of Anxiety

Based on a t-score of 60 on the RCMAS, three participants in the school refusal group and two participants in the school attendee group scored within the clinical range on this anxiety measure.

Having ascertained a large, positive correlation between anxiety and depression (r=.70, p<.01), a one-way between groups ANCOVA was selected to test the hypothesis that participants in the school refusal group would have higher levels of anxiety than participants in the school attendee group. The effect of group (school refusal, school attendee) on anxiety (RCMAS total score) was analysed whilst controlling for depression. Results indicated that there was no significant effect of group on anxiety

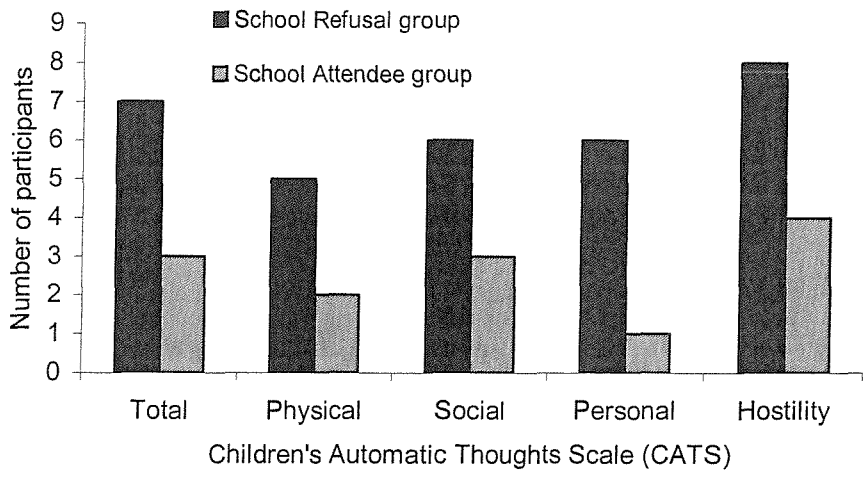
level ($F(1,26)=.38$, $p>.05$. $\eta^2=.02$); thus, participants in both groups reported similar levels of anxiety in this sample. Similarities between the two groups on RCMAS t-scores and total scores may have resulted from the selection of non-clinical samples in this study (higher anxiety scores might be found in clinical samples of adolescents who refuse school).

Further analyses were undertaken after the four adolescents with physical and/or psychological problems were omitted from the school refusal sample. Results from a one-way between groups ANCOVA indicated that there was no significant effect of group on anxiety level ($F(1,22)=.53$, $p>.05$, $\eta^2=.02$). Therefore, even with possible 'clinical' cases excluded, participants in both groups report similar levels of trait anxiety.

Exploring automatic thoughts

Based on the clinical cut-off scores for the CATS (Schniering & Rapee, 2001), more participants in the school refusal group score in the clinical range for this measure than participants in the school attendee group. Figure 2 shows the number of participants scoring in the clinical range.

Figure 2. Number of participants scoring in the clinical range on the CATS total and subscales.



Group differences in the frequency and type of automatic thoughts were explored. In order to minimise familywise error in these analyses, the Bonferroni correction procedure was used and an alpha level of p=.01 was set. An independent samples t-test was conducted to compare the mean CATS total scores for the school refusal and school attendee groups. There was no significant difference in the CATS total scores ($t(26)$=1.78), but a moderate effect size was observed (η^2=.11). Mann-Whitney U tests were employed to compare the groups on the four subscales. Although the mean scores for the groups (Table 1) suggest more automatic thoughts in the school refusal group, statistical analyses suggest that the group differences are not significant. There were no significant differences between the scores on the physical subscale (z=-.56), social subscale (z=-.32), personal subscale (z=-1.34), or the hostility subscale (z=-1.96). Thus, participants in the school refusal group do not appear to have a greater

frequency of automatic thought than participants that attend school, nor do they endorse a specific type of thought more often than school attendees.

Further analyses undertaken after the four participants with physical and/or psychological problems were excluded (t tests and Mann-Whitney U tests) also revealed no significant group differences ($p<.01$) on the CATS total score ($t(22)=1.06$, $\eta^2=.05$), physical subscale ($z=-.86$), social subscale ($z=-.30$), personal subscale ($z=-.27$), or hostility subscale ($z=-2.20$), suggesting similar frequencies of negative thoughts in both non-clinical samples of adolescents.

Exploring the role of self-efficacy

Group differences in self-efficacy were analysed using independent samples t-tests. A corrected alpha level of p=.01 was also set for these analyses. No statistically significant differences were found between the groups on total self-efficacy scores ($t(26)=1.69$, $\eta^2=.10$), academic self-efficacy scores ($t(26)=1.73$, $\eta^2=.10$), or the separation self-efficacy scores ($t(26)=1.40$, $\eta^2=.07$). For this sample of adolescents, participants that attend school and participants that refuse school rate themselves as equally confident in being able to cope with a range of school-related situations.

Following the removal of the four participants with physical and/or psychological problems from the analyses, further t tests again revealed no significant group differences ($p<.01$) on total self-efficacy ($t(22)=1.24$, $\eta^2=.07$), academic self-efficacy ($t(22)=1.13$, $\eta^2=.06$), or separation self-efficacy ($t(22)=1.16$, $\eta^2=.06$). Thus, participants in both groups rate themselves as equally confident on the SEQSS items. The exclusion of 'clinical' cases from the analyses reduced the effect size on all of the

scales, perhaps suggesting that clinical caseness, rather than group, has an effect on school-related self-efficacy.

Exploring the relationship between anxiety and cognition

Several partial correlational analyses were carried out to determine whether there was a relationship between anxiety and each of the measures of cognition, whilst controlling for depression. Table 4 summarises the results.

Table 4.

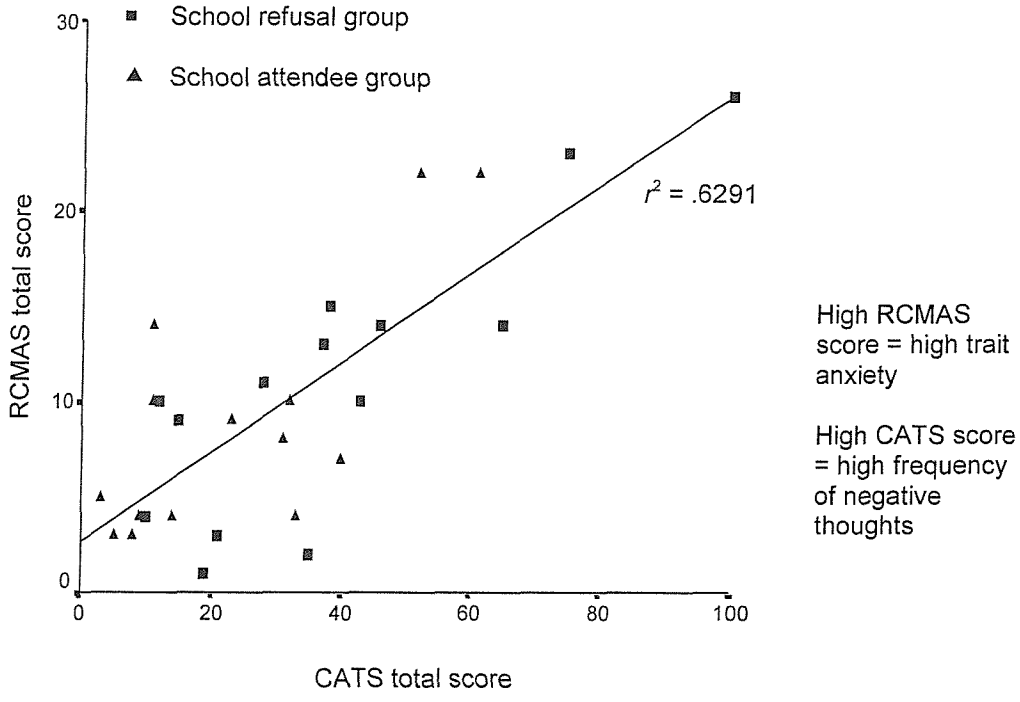
Partial correlations between RCMAS total anxiety and measures of cognition for the total sample (*N*=28) and modified sample[#] (N=24).

Measure	Total sample (*r*)	Modified sample (*r*)
CATS total[a]	.63**	.44*
CATS physical[a]	.50**	.28
CATS social[a]	.74**	.70**
CATS personal[a]	.62**	.47*
CATS hostility[a]	.09	.01
SEQSS total[b]	-.49**	-.31
SEQSS academic[b]	-.43*	-.22
SEQSS separation[b]	-.49**	-.34

Note. *$p<.05$. **$p<.01$. [#] = 4 'clinical' cases excluded [a] Higher CATS scores = higher frequency of negative thoughts relating to physical threat, social threat, personal failure, and hostility. [b] Higher SEQSS scores = higher perceived self-efficacy.

There was a strong, positive, partial correlation between anxiety and the CATS total score (r=.63, p<.01), suggesting that high levels of anxiety are associated with higher levels of negative automatic thoughts (see Figure 3). A moderate, positive, partial correlation was found between anxiety and the CATS physical subscale score (r=.50, p<.01), and strong correlations were found between anxiety and the CATS social subscale (r=.74, p<.01) and the CATS personal subscale(r=.62, p<.01). There was no correlation between anxiety and the CATS hostility subscale score (r=.09, p>.05). The subscale analyses reveal that high levels of anxiety are associated with higher frequencies of thoughts relating to physical threat, social threat, and personal failure. However, anxiety is not related to the frequency of hostile thoughts in this sample. These results are suggestive of reasonably strong associations between anxiety and threat-related cognition within this sample of adolescents, but the associations established here are unlikely to be unique to this sample given the ample validity of the CATS as a measure of cognitive self-statements across a range of anxiety and depressive disorders. In other words, similar anxiety-cognition associations might be found in samples that do not include adolescents with school refusal. Consideration must also be given to the partially overlapping content item of the RCMAS and CATS, which may have spuriously increased the strength of correlations found in this study.

Figure 3. Scatterplot showing the relationship between trait anxiety (RCMAS total score) and negative thoughts (CATS total score).



Results from correlational analyses between anxiety and the SEQSS scores were consistent, with moderate, negative partial correlations being demonstrated between anxiety and total self-efficacy scores (r=-.49, p<.01), academic self-efficacy scores (r=-.43, p<.05), and separation self-efficacy scores (r=-.49, p<.01). Thus, higher ratings of anxiety are associated with lower ratings of self-efficacy.

Correlational analyses were also undertaken following the exclusion of the four participants with physical and/or psychological problems. Overall, a similar pattern of results was revealed but associations between the variables were weaker. There was a moderate, positive partial correlation between trait anxiety and the CATS total score (r=.44, p<.05); a weak, positive partial correlation between anxiety and the CATS

physical subscale (r=.28, p>.05); a strong, positive partial correlation between anxiety and the CATS social subscale score (r=.70, p<.01); a moderate, positive partial correlation between anxiety and the CATS personal subscale (r=.47, p<.05); and no correlation between anxiety and the CATS hostility subscale (r=.01, p>.05). A moderate, negative partial correlation was found between anxiety and SEQSS total self-efficacy (r=-.31, p>.05), a weak, negative partial correlation was found between anxiety and academic self-efficacy (r=-.22, p>.05), and a moderate, negative partial correlation was found between anxiety and separation self-efficacy (r=-.34, p>.05). These results might suggest that the presence of physical and/or psychological problems increases the strength of association between trait anxiety and measures of cognition.

Discussion

The aim of this paper was to compare trait anxiety, automatic thoughts, and self-efficacy in school refusal and school attendee groups. In addition, the underlying reasons and functions for school refusal were assessed. Results of this study showed that children in the school refusal group did not attend school primarily for reasons of tangible reinforcement or avoidance of stimuli that provoke negative affectivity. Some children reported more than one reason for non-attendance. The school refusal group did not differ from the attendee group on levels of trait anxiety. Automatic thoughts were greater in children that refused school, but did not differ significantly from children who attended school. Similarly, no significant differences were found between the two

groups on a measure of self-efficacy. Finally, when the data from both groups was combined, the results showed a significant correlation between anxiety and negative automatic thoughts, with an increase in trait anxiety being associated with higher frequencies of thoughts related to physical threat, social threat, and personal failure. Increased anxiety was also associated with lower levels of self-efficacy across the combined sample of adolescents.

Consistent with current knowledge of school refusal, descriptive data have highlighted the great heterogeneity of school refusal behaviour, even within this small sample. Parents reported a range of reasons for non-attendance: some related to physical or mental health (anorexia, depression), some related to the school environment (teachers), and some related to peers (bullying). The issues raised by parents in this study are similar to those reported in large-scale studies (e.g. Malcolm, Wilson, Davidson, & Kirk, 2003). Compared to the school attendee group, the school refusal group presented with more physical and psychological difficulties. Three participants (21%) in the school refusal group had diagnosed psychological problems. This finding is similar to the prevalence rate of psychological disorders reported in other studies (e.g. McShane, Walter, & Rey, 2001).

The SRAS-R revealed that adolescents within this sample had different underlying motivations for not attending school, including tangible reinforcement (preferences for out-of-school activities during school hours) and avoidance of stimuli provoking negative affectivity (feeling sad or nervous). Kearney and Albano (2004) found that older children often refuse school either to escape from aversive social situations or to pursue tangible rewards, so it is interesting that no participants in the

current study endorsed the escape function as a primary reason for their school refusal behaviour. Parent ratings on the SRAS-R differed from the adolescent ratings in almost half of the sample, suggesting different perceptions about the motivators of school refusal between parents and their children. Similar parent-child agreement rates have been reported in the anxiety literature (Cole, Hoffman, Tram, & Maxwell, 2000) but lower rates have been reported in the school refusal literature (Higa, Daleiden, & Chorpita, 2002). Parent-child agreement is important to consider, since there is some evidence to suggest that consistent ratings lead to more favourable treatment outcomes (Kearney & Silverman, 1990).

The associations between the functional categories of school refusal and ratings of anxiety were explored. Contrary to expectations, correlations were found between anxiety and all of the functional conditions. Previous work exploring concurrent validity of the SRAS indicated higher trait anxiety scores in the negative reinforcement functions and the attention-seeking function (Kearney, 2002). Results from the current study also imply a relationship between anxiety and tangible reinforcement, but this finding should not be taken as conclusive due to the small sample size used in the data analysis.

The percentage of adolescents with clinical levels of anxiety in the school refusal group (21%) is similar to rates defined in other community samples (Bools, Foster, Brown, & Berg, 1990; Egger, Costello, & Angold, 2003). However, the hypothesis that the school refusal group would have higher levels of trait anxiety than the school attendee group was not supported in the present study. No differences were found between the groups on the number of participants scoring above the clinical cut-off on the RCMAS, nor were there any differences in the mean RCMAS scores. Hansen,

Sanders, Massaro, and Last (1998) also found that trait anxiety was not a significant predictor of absenteeism.

Statistical analyses revealed no significant differences between groups on any of the CATS scores, refuting the hypotheses that the school refusal group would have a higher frequency of negative thoughts, with more thoughts related to physical threat, social threat, and personal failure. The standard deviations associated with each of the mean scores go some way to explain the non-significance of results. For example, even after the removal of the one outlier in the CATS total score data, standard deviations for both the school refusal group (19.88) and school attendee group (18.24) remained large, with scores being evenly distributed across the range for this measure. Whilst the results do not reveal a pattern of cognition associated solely with school refusal, the clinical cut-off scores for each individual provide more interesting findings. While both groups have an equal overall frequency of negative thoughts, the severity of negative thoughts is greater for adolescents that refuse school. It could, therefore, be tentatively suggested that "clinical" levels of negative automatic thoughts are an important factor in school refusal behaviour. More research is needed to explore this hypothesis.

No support was found for the hypothesis that the school refusal group would report lower self-efficacy than the school attendee group. Levels of self-efficacy were similar in both groups. Although the SEQSS does not have norms, with a possible total score of 60, self-efficacy was moderately high in both the school refusal and school attendee groups (44.36 and 49.93, respectively). Previous research has also shown variability in a school refusal sample, with participants scoring across the range on this

measure (Heyne et al., 1998).

Taking the sample as a whole, the results supported the hypotheses related to positive associations between anxiety and negative thoughts for physical threat, social threat, and personal failure. This finding is consistent with previous literature indicating increased perceptions of threat in childhood anxiety (e.g. Schniering & Rapee, 2002; Shortt, Barrett, Dadds, & Fox, 2001; Taghavi, Moradi, Neshat-Doost, Yule, & Dalgleish, 2000) and it lends support to cognitive models of anxiety. Thus, negative thoughts centred on themes of threat or failure appear to be characteristic of adolescents with higher levels of trait anxiety. Results also indicated that hostile thoughts were not associated with anxiety. This result is also consistent with research that suggests that hostile biases in cognition are more frequently associated with conduct and aggression problems (Dodge, 1980; Dodge & Frame, 1982). The results also showed moderate negative correlations between anxiety and self-efficacy and add to the growing literature on the role of self-efficacy in childhood emotional disorders (Muris, 2002).

Additional analyses undertaken following the exclusion of the four participants with known physical and/or psychological problems revealed no significant group differences on measures of trait anxiety, negative thoughts, or self-efficacy, and continued to show associations between trait anxiety, threat-related cognition, and self-efficacy. Of interest to this discussion was the finding that the significance of group differences, effect sizes, and strength of associations reduced following the exclusion of these participants. This may suggest that adolescents with school refusal do not differ significantly from the school-attending peers unless they have co-morbid physical or psychological problems. Thus, the roles of anxiety and cognition may differ according

to whether a clinical or non-clinical population is studied, and might explain why high levels of trait anxiety, for example, are often reported in large clinical studies (e.g. Last & Strauss, 1990).

Whilst these results have highlighted possible links between the severity of negative thoughts and school refusal behaviour (with more adolescents in the school refusal group scoring about clinical cut-offs on the CATS), there is little evidence to suggest any significant differences between the cognitions of adolescents that refuse school and those that attend school (with frequency of negative thoughts and perceived level of self-efficacy being similar in both groups). However, the association between negative thoughts, self-efficacy, and anxiety are clear, such that adolescents with higher trait anxiety typically have higher frequencies of negative thoughts and lower perceived self-efficacy (regardless of whether or not they attend school). Thus, results from this study tentatively suggest that there are no specific patterns of cognition associated with school refusal, but it does appear important to consider patterns of cognition associated with trait anxiety when assessing adolescents with school refusal and formulating effective treatment plans.

These results have implications for the use of cognitive therapy in adolescents with school refusal. Certainly, it could be argued that cognitive therapy might be an effective treatment option in high-anxious adolescents that refuse school due to the presence of maladaptive cognition and low perceived ability to cope with the school situation. However, it is far from clear as to whether maladaptive cognition plays a role in school refusal in adolescents with low trait anxiety. Results from the present study would suggest that maladaptive cognition does not differentiate adolescents who refuse

school from those who do not. Whilst the non-significant results from this exploratory study cannot be taken as evidence that cognition has no role to play in school refusal, they perhaps indicate the need for some caution in selecting cognitive therapy as a treatment for school refusal more generally. As would be the case with any given therapy, treatment of school refusal should be undertaking only after conducting a thorough functional assessment, also having specifically considered the roles of anxiety and maladaptive cognition.

Although this study aimed to determine differences between adolescents that refuse school and adolescents that attend school, it is the similarities between these groups that provide a more interesting discussion. For example, if participants in the school attendee group have equally high levels of anxiety, frequent negative thoughts, and similar levels of self-efficacy to participants in the school refusal group, why do these adolescents *not* have difficulties in attending school? This result challenges the assumption that anxiety and maladaptive cognition are causal factors in school refusal. It is more likely that anxiety is just one of several factors that motivate school refusal in this sample of adolescents. It is possible that other factors, such as parental mental health (Martin, Cabrol, LePine, & Mouren-Simeoni, 1999), family dynamics (Bernstein & Borchardt, 1996; Bernstein, Svingen, & Garfinkel, 1990; Kearney & Silverman, 1995), or other co-morbid psychological disorders (Berg, 1992; McShane, Walter, & Rey, 2001; Werry, 1996), are stronger predictors of school refusal behaviour. If factors other than anxiety more potent motivators, the type of intervention offered to the adolescents and their families would differ from a standard cognitive-behavioural approach. Further studies to assess the importance of several motivating factors could

have utility in differentiating the two groups of adolescents and indicating more efficacious treatment approaches.

There are a number of limitations associated with this study. Firstly, the age and sex of participants in the current study requires consideration. Although participants were recruited through mainstream secondary education services, the majority of participants were Year 9 pupils, with a mean age of 14;6 years. Whilst this sampling bias means that results cannot necessarily be generalised to all adolescents with school refusal, it has minimised differences that may have resulted from age, development, and school curriculum. Reasons for the bias in this sample might include the school term in which recruitment took place and the academic workload on adolescents in different school years, for example, Standardised Achievement Tasks (SATs) undertaken in Year 9. In relation to the sex of participants; the school refusal group was comprised of thirteen males, compared to only one female. Although the literature suggests no sex differences in school refusal (Hansen, Sanders, Massaro, & Last, 1998; King & Bernstein, 2001), the difference in male and female consent rates was notable in this study. This was unexpected and may have been the result of chance, or possibly due to typical behavioural differences in presentation. With externalising behavioural problems being more common in boys (Carr, 1999), parents might pursue more clinical and educational services in an effort to understand and receive support for their sons' difficulties. A more balanced sample of male and female participants might have produced different results.

Further limitations of the present study relate to the sample size. Failure to establish significant effects may have been the result of inadequate power associated

with a small sample size. It is possible that several Type 2 errors resulted, leading to the erroneous conclusion that there were no differences between the groups on measures of anxiety, automatic thoughts, and perceived self-efficacy. The lack of previous literature in this area meant that expected effect size or adequate sample size could not be calculated prior to commencement of the study. Other studies in related areas have, however, established reasonable effects of anxiety and cognitive processing with sample sizes of 17 (Taghavi, Moradi, Neshat-Doost, Yule, & Dalgleish, 2000), 20 (Vasey, El-Hag, & Daleiden, 1996) and 29 (Dineen & Hadwin, 2003). Post-hoc power analyses revealed that if a large effect size of .80 is to be demonstrated in future research, 40 participants are ideally required in each group (Faul & Erdfelder, 1992).

It must also be recognised that the results from this study relate to a non-clinical sample of adolescents. This may explain group similarities on the measures, and specifically levels of trait anxiety. Future research, comparing a clinical school refusal group with same-aged peers might produce results in favour of the original hypotheses.

Some consideration must also be given to the measures employed in the study. Self-reported cognitions are likely to vary according to the context in which they are given. Although questionnaire measures are currently acknowledged as having the most utility in cognition research (Glass & Arnkoff, 1997), respondent ratings in this study might have been influenced by factors such as the educational establishment in which they were completed, and the length of time in which an adolescent had been absent from school. More clinically valid cognitions associated with school refusal might be generated by thought-listing methods in an everyday school situation. Comparisons

between cognitions generated using endorsement and thought-listing methods might reveal significant differences between school refusal and school attendee groups. Although the original hypotheses were not supported, it cannot be concluded that negative thoughts are not implicated in school refusal. Results might have been a product of the measure used. Other measures of automatic thoughts or self-statements (e.g., CNCEQ, NASSQ) might have revealed very different results. The CATS provided data on negative thoughts experienced in a one-week timeframe. If participants had not attended school within the week of assessment, the ratings on the questionnaire may be lower than those that might have been given if the participant had been forced to attend school that same week.

The validity of the measures used also affects the extent to which conclusions can be generalised. The SRAS-R reflects the underlying motivating function of school refusal for an individual child. However, motivational factors associated with school refusal are not static and can change over time (Evans, 2000). Thus, functional categories described in the current study may not be truly representative of the reasons for which the participants initially began to refuse school. The use of the CATS as a single measure of automatic thoughts meant that only negative thoughts were assessed. The addition of a measure identifying the role of positive thoughts or coping cognition and/or the ratio of positive to negative thoughts (e.g. Treadwell & Kendall, 1996) might have added to conclusions drawn regarding the role of cognition in school refusal behaviour. Lastly, the SEQSS was designed for use with children that refuse school (Heyne et al., 1998) but was utilised as a measure across both groups in the current study. Failure to detect group differences may have been due to poor discriminant

validity of the SEQSS. The paucity of research in this area and the distinct lack of research measures, make the selection of a more valid measure difficult at the present time.

Finally, as has been highlighted throughout the text, the effect of other variables on the results must not be underestimated. Depression was present in a significant number of participants. Partialling out the effects of depression in the analyses, the effect of anxiety on school refusal behaviour was ascertained for this sample in line with the aims of the study. With hindsight, it may have been interesting to study the separate and additive effects of anxiety and depression in school refusal behaviour. The links between parental mental health, family history of school refusal, and family dynamics, may also have been important variables to consider, especially as there is now some evidence to suggest that parent beliefs are mediators in the self-reports of cognition and threat perception in children (Chorpita, Albano, & Barlow, 1996; Shortt, Barrett, Dadds, & Fox, 2001).

Notwithstanding these limitations, this study has provided some novel information on the role of anxiety, automatic thoughts, and self-efficacy, in adolescents that refuse school. Future research should build on the work undertaken in this study, in an effort to establish the exact role of anxiety and cognition in school refusal difficulties, and ultimately inform clinical treatment practice.

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Appendices

Guide for Authors

Appendix A

Manuscript submission requirements of Clinical Psychology Review

Papers accepted for *Clinical Psychology Review* may not be published elsewhere in any language without written permission from the author(s) and publishers. Upon acceptance for publication, the author(s) must complete a transfer of Copyright Agreement form.

COMPUTER DISKS: Authors are encouraged to submit a 3.5" HD/DD computer disk to the editorial office; 5.25" HD/DD disks are acceptable if 3.5" disks are unavailable. Please observe the following criteria: (1) Send only hard copy when first submitting your paper. (2) When your paper has been refereed, revised if necessary, and accepted, send a disk containing the final version with the final hard copy. Make sure that the disk and the hardcopy match exactly (otherwise the diskette version will prevail). (3) Specify what software was used, including which release, e.g., WordPerfect 6.0a. (4) Specify what computer was used (IBM compatible PC, Apple Macintosh, etc.). (5) The article file should include all textual material (text, references, tables, figure captions, etc.) and separate illustration files, if available. (6) The file should follow the general instructions on style/arrangement and, in particular, the reference style of this journal as given in the Instructions to Contributors. (7) The file should be single-spaced and should use the wrap-around end-of-line feature, i.e., returns at the end of paragraphs only. Place two returns after every element such as title, headings, paragraphs, figure and table call-outs. (8) Keep a backup disk for reference and safety.

TITLE PAGE: The title page should list (1) the article; (2) the authors' names and affiliations at the time the work was conducted; (3) a concise running title; and (4) an unnumbered footnote giving an address for reprint requests and acknowledgements.

ABSTRACT: An abstract should be submitted that does not exceed 200 words in length. This should be typed on a separate page following the title page.

KEYWORDS: Authors should include up to six keywords with their article. Keywords should be selected from the APA list of index descriptors, unless otherwise agreed with the Editor.

STYLE AND REFERENCES: Manuscripts should be carefully prepared using the *Publication Manual of the American Psychological Association*, 5th ed., 1994, for style. The reference section must be double spaced, and all works cited must be listed. Avoid abbreviations of journal titles and incomplete information.

Reference Style for Journals: Raymond, M.J. (1964). The treatment of addiction by aversion conditioning with apomorphine. *Behaviour Research and Therapy, 3,* 287-290.

For Books: Barlow, D.H., Hayes S.C., & Nelson, R.O. (1984). *The scientist practitioner: Research and accountability in clinical and educational settings.* Elmsford, NY: Pergamon.

TABLES AND FIGURES: Do not send glossy prints, photographs or original artwork until acceptance. Copies of all tables and figures should be included with each copy of the manuscript. Upon acceptance of a manuscript for publication, original, camera-ready photographs and artwork must be submitted, unmounted and on glossy paper. Photocopies, blue ink or pencil are not acceptable. Use black india ink and type figure legends on a separate sheet. Write the article title and figure number lightly in pencil on the back of each.

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COPYRIGHT: Publications are copyrighted for the protection of the authors and the publisher. A Transfer of Copyright Agreement will be sent to the author whose manuscript is accepted. The form must be completed and returned to the publisher before the article can be published.

The Journal of Child Psychology and Psychiatry

Appendix B

Manuscript submission requirements of The Journal of Child Psychology and Psychiatry

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Author Guidelines

Notes for Contributors

Contributions from any discipline that further knowledge of the mental life and behaviour of children are welcomed. Papers are published in English, but submissions are welcomed from any country. Contributions should be of a standard which merits presentation before an international readership.

Papers may assume either of the following forms:

- *Original articles*
  These should make an original contribution to empirical knowledge, to the theoretical understanding of the subject, or to the development of clinical research and practice. Adult data are not usually accepted for publication unless they bear directly on developmental issues in childhood and adolescence. **Original articles should not exceed 6000 words, including title page, abstract, references, tables, and figures. Limit tables and figures to 5 or fewer double-spaced manuscript pages. The word count of both text and references should be clearly stated on the front page.**
- *Review articles*
  These will survey an important area of interest within the general field and may be offered or commissioned. All papers in the Annual Research Review, Annotations and Practitioner Reviews are usually commissioned.

General

1. Submission of a paper to the *Journal* will be held to imply that it represents an original contribution not previously published (except in the form of an abstract or preliminary report); that it is not being considered for publication elsewhere; and that, if accepted by the Journal, it will not be published elsewhere in the same form, in any language, without the consent of the Editors. When submitting a manuscript, authors should state in a covering letter whether they have currently in press, submitted or in preparation any other papers that are based on the same data set, and, if so, provide details for the Editors.

Ethics

2. Authors are reminded that the *Journal* adheres to the ethics of scientific publication as detailed in the *Ethical principles of psychologists and code of conduct* (American Psychological Association, 1992). These principles also imply that the piecemeal, or fragmented publication of small amounts of data from the same study is not acceptable.

3. Papers should be submitted online. For detailed instructions please go to: **http://acpp.manuscriptcentral.com** Previous users can *Check for existing account*. New users should *Create a new account*. Alternatively, contributions, correspondence and a disk containing all files can be sent to The Editors, JCPP, St Saviour's House, 39/41 Union Street, London SE1 1SD, UK. Telephone: +44 (0)20 7403 7458,
Faxline: +44 (0)20 7403 7081, E-mail: mark.jenkins@acpp.org.uk

Upon acceptance of a paper, the author will be asked to transfer copyright to the ACPP.

Manuscript Submission

1. The manuscript should be typed clearly on one side only of white A4 (8 x 11 inches or 210 x 297 mm) paper, and double-spaced throughout including references and tables, with wide margins. Sheets should be numbered consecutively. A letter giving the name, telephone and fax number, and email address of the author to whom communication should be addressed should accompany the submission. Authors not submitting online should send 2 copies of the manuscript together with a 3.5 floppy disk containing all relevant files. The preferred file formats are MS Word or WordPerfect, and should be PC compatible. If using other packages the file should be saved as Rich Text Format or Text only.

2. Papers should be concise and written in English in a readily understandable style. Care should be taken to avoid racist or sexist language, and statistical presentation should be clear and unambiguous. The *Journal* follows the style recommendations given in the *Publication Manual of the American Psychological Association* (5th edition, 2001), available from the Order Department, APA, P.O. Box 2710, Hyattsville, MD 20784, USA.

3. The *Journal* is **not** able to offer a translation service, but, in order to help authors whose first language is not English, the Editors will be happy to arrange for accepted papers to be prepared for publication in English by a sub-

Appendix B

editor.

Manuscript submission requirements of The Journal of Child Psychology and Psychiatry

Layout

1. *Title*

The first page of the manuscript should give the title, name(s) and short address(es) of author(s), and an abbreviated title (for use as a running head) of up to 80 characters. Authors requesting masked review should provide a first page with the title only and adapt the manuscripts accordingly.

2. *Abstract*

The abstract should not exceed 300 words and should be structured in the following way with bold marked headings: Background; Methods; Results; Conclusions; Keywords; Abbreviations. The abbreviations will apply where authors are using acronyms for tests or abbreviations not in common usage. Any questions regarding the new structure should be addressed to the Editors.

3. *Headings*

Articles and research reports should be set out in the conventional format: Methods, Results, Discussion and Conclusion. Descriptions of techniques and methods should only be given in detail when they are unfamiliar. There should be no more than three (clearly marked) levels of subheadings used in the text.

4. *Acknowledgements*

These should appear on a separate sheet, double spaced, at the end of the body of the paper, before the References.

5. *Correspondence to*:

Full name, address, phone, fax and email details of the corresponding author should appear on a separate sheet of paper at the end of the manuscript, before the References.

Referencing

The *Journal* follows the text referencing style and reference list style detailed in the *Publication manual of the American Psychological Association* (5th edition).

(a) References in text.

References in running text should be quoted as follows:
Smith and Brown (1990), or (Smith, 1990), or (Smith, 1980, 1981a, b), or (Smith & Brown, 1982), or (Brown & Green, 1983; Smith, 1982).

For up to five authors, all surnames should be cited in the first instance, with subsequent occurrences cited as et al., e.g. Smith et al. (1981) or (Smith et al., 1981). For six or more authors, cite only the surname of the first author followed by et al. However, all authors should be listed in the Reference List.

Join the names in a multiple author citation in running text by the word 'and '. In parenthetical material, in tables, and in the References List, join the names by an ampersand (&).

References to unpublished material should be avoided.

(b) Reference list.

Full references should be given at the end of the article in alphabetical order, and not in footnotes. **Double spacing** must be used.

References to journals should include the authors ' surnames and initials, the full title of the paper, the full name of the journal, the year of publication, the volume number, and inclusive page numbers. Titles of journals must not be abbreviated and should be italicised.

References to books should include the authors ' surnames and initials, the full title of the book, the place of publication, the publisher 's name and the year of publication.

References to articles, chapters and symposia contributions should be cited as per the examples below:
Kiernan, C. (1981). Sign language in autistic children. *Journal of Child Psychology and Psychiatry*, 22, 215-220.
Thompson, A. (1981). *Early experience: The new evidence*. Oxford: Pergamon Press.
Jones, C.C., & Brown, A. (1981). Disorders of perception. In K. Thompson (Ed.), *Problems in early childhood* (pp. 23-84). Oxford: Pergamon Press.

Use Ed.(s) for Editor(s); edn. for edition; p.(pp.) for page(s); Vol. 2 for Volume 2.

Tables and Figures

All Tables and Figures should be supplied on separate sheets, not included within the text, and have their intended position clearly indicated in the manuscript. They should be constructed so as to be intelligible without reference to the text. Figures should be supplied as high quality original artwork and any lettering or line work should be able to sustain reduction to the final size of reproduction. Tints and complex shading should be avoided and colour should not be used. However, if authors consider colour essential, please note that the extra costs will have to be borne by the authors themselves. Figures supplied on disk must be accompanied by a hard copy and should be originated in a drawing package and saved as an EPS or TIFF file. Halftones should only be included when essential and must be prepared on glossy paper and have good contrast. Table and figure legends should be typed on a separate page.

Nomenclature and symbols

Each paper should be consistent within itself as to nomenclature, symbols and units. When referring to drugs, give generic names, not trade names. Greek characters should be clearly indicated.

Refereeing
The *Journal* has a policy of anonymous peer review and the initial refereeing process seldom requires more than three months. Authors may request that their identity be withheld from referees and should follow the procedure for masked review, as above. Most manuscripts will require some revision by the authors before final acceptance. Manuscripts, whether accepted or rejected will not be returned to authors. The Editor's decision on the suitability of a manuscript for publication is final.

Proofs
Proofs will be sent to the designated author only. These will be sent via email as a PDF file, therefore a current email address must be provided with the manuscript. Only typographical or factual errors may be changed at proof stage. The publisher reserves the right to charge authors for correction of non-typographical errors.

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Appendix B

Manuscript submission requirements of The Journal of Child Psychology and Psychiatry

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Appendix C

Ethics committee approval letter

27 May 2004

Sarah Rogers
Department of Clinical Psychology
University of Southampton
Highfield
Southampton SO17 1BJ

Dear Sarah,

Re: The role of cognition in anxiety-based school refusal. A study investigating automatic thoughts and perceived self-efficacy in a non-clinical sample of adolescents

I am writing to confirm that the above titled ethics application was approved by the School of Psychology Ethical Committee in October 2003.

Should you require any further information, please do not hesitate in contacting me on 023 8059 3995.

Please quote approval reference number CLIN/03/04.

Yours sincerely,

KNLucas

Kathryn Lucas
Secretary to the Ethics Committee

University of Southampton

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Doctoral Programme in Clinical Psychology

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Appendix D

Parent consent form

A Study Looking at Worry and The Thoughts Young People Have about School

CONSENT FORM

I confirm that I have read and understood the information sheet regarding the study about worry and the thoughts young people have about school, which is associated with the Department of Clinical Psychology at the University of Southampton. I have had the opportunity to ask questions.

I understand that my participation is voluntary and that I am free to withdraw at any time without giving a reason. This will in no way affect the medical, educational or legal rights of my child or myself.

I give consent for my child to take part in this study.

I also agree to take part in this study.

I understand that data collected as part of this research project will be treated confidentially, and that published results of this project will maintain my confidentiality.

A copy of this consent form will be offered to me.

Child's name _____

Child's date of birth _____

Your name _____

Your address _____

_____ post code _____

Your signature _____

Today's date _____

THANK YOU FOR YOUR HELP WITH THIS PROJECT

University of Southampton

School of Psychology
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Appendix D

Parent information letter (school refusal group)

A Study Looking at Worry and The Thoughts Young People Have about School

Dear Parent/Guardian,

I am Sarah Rogers, a Trainee Clinical Psychologist from Southampton University. I am inviting your child to take part in a research study. The research study is looking at worry and thoughts about school, in children who attend school and children who have difficulties attending school. Your child was chosen for the study because they have difficulty going to school. It is hoped that 40 children will be taking part in this study. Before you decide whether your child should take part it is important that you understand why the research is being done and what it will involve. Please take time to read the following information carefully.

It is up to you whether you decide to take part. If you do decide to take part you are free to withdraw at any time, and without giving a reason.

Parent participation in the project

I would like you to complete the enclosed information sheet and questionnaire, and return both in the envelope provided to . They should take no more than 10 minutes to complete. This information will tell me a bit about your child and will help me understand the difficulties they have in attending school.

Child participation in the project

The aim of this project is to study worry in children and to identify the types of thoughts they might have about attending school. It is hoped that the results from this study can be used by health and educational services that want to know how best to help children who do not attend school.

I will be measuring children's worries using a questionnaire. The questionnaire is designed for use with children and requires the child to answer "yes" or "no" to statements such as, "I am afraid of lots of things", and "Often I feel sick in my stomach".

I will be asking the children to complete a questionnaire that will tell me some of the reasons why they find it difficult going to school. The children will circle a number, from 0 to 6, to indicate how much the statement describes them. For example, a child might circle 6 (always) after reading the statement, "How often do you stay away from school because you will feel sad or depressed if you go?"

Children's thoughts will be measured using two questionnaires. The first questionnaire looks at thoughts that many children might have, e.g. "I'll never be as good as other people are". The second questionnaire looks at how well children think they can cope with going to school, e.g. "How sure are you of being able to do things in front of your class or group?" Both questionnaires will ask the child to rate their answers on a scale of 1-5.

Parent information letter (school refusal group)

One final brief questionnaire will also be given to determine whether your child feels depressed, as children who refuse school commonly feel both anxious and depressed. Your child will rate answers to statements such as "I feel like crying", as "most", "sometimes", or "never".

I would work with your child at during school hours. I would spend no more than 45 minutes with your child and your child would only need to take part on one occasion.

I will only work with your child if he or she is willing. Your child will be told they can leave the session whenever they wish. To reassure you, all the information I collect will remain completely confidential. If you would like to, you can view the questionnaires that I will use with your child before they complete them.

What will happen to the results of the project?

The results of this study will be submitted as part of my Doctorate in Clinical Psychology. In addition, they will be submitted for publication in the scientific literature. Your child will not be identified in any publication.

Who has reviewed the study?

The Department of Psychology Research Ethics Committee, University of Southampton, has reviewed this study. If you have any questions about your child's rights as a participant or you feel your child has been placed at risk, you may contact the Chair of the Ethics Committee, Department of Psychology, University of Southampton, Southampton, SO17 1BJ. Telephone: 02380 593995.

Contact for further information

A summary of the research project can be supplied to you upon request once the study is completed. To request a summary or if you have any questions please contact:

Sarah Rogers, Trainee Clinical Psychologist, Department of Clinical Psychology, Building 44 (Shackleton), University of Southampton, Highfield, Southampton, SO17 1BJ.
E-mail: sr701@soton.ac.uk OR leave a message on: 02380 595321.

I CANNOT WORK WITH YOUR CHILD UNLESS I HAVE YOUR WRITTEN PERMISSION.

If you are willing to take part in this project please fill out the attached consent form, questionnaire and child's information sheet and return them all in the envelope provided, to

Thank you.

Yours sincerely,

Sarah Rogers

Appendix D

Demographic information sheet (school refusal group)

Office Use Only
Participant no. _____

A Study Looking at Worry and The Thoughts Young People Have about School

CHILD INFORMATION SHEET

Please complete the following information about your child. All information will remain strictly confidential.

Child's name _____ Male/Female (please delete)

Date of Birth _____

School Year (e.g. Year 10) _____

For how long has your child had difficulties attending school (months/years)?

_____

What do you understand to be the main reason for your child not wanting to attend school?

_____

Does your child have any medical diagnoses (e.g. anxiety, depression, M.E.) that might affect his or her ability to attend school? YES/NO?

If yes, please state _____

Your name _____

Your address _____ ☐

Telephone no. _____ ☐

Would you prefer to be contacted by letter or telephone call? Please tick the appropriate box.

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Appendix D

Parent information letter (school attendee group)

A Study Looking at Worry and The Thoughts Young People Have about School

Dear Parent/Guardian,

I am Sarah Rogers, a Trainee Clinical Psychologist from Southampton University. I am inviting your child to take part in a research study. The research study is looking at worry and thoughts about school, in children who attend school and children who have difficulties attending school. Your child was chosen for the study because they do not have difficulties going to school. It is hoped that 40 children will be taking part in this study. Before you decide whether your child should take part it is important that you understand why the research is being done and what it will involve. Please take time to read the following information carefully.

It is up to you whether you decide to take part. If you do decide to take part you are free to withdraw at any time, and without giving a reason.

Parent participation in the project

I would like you to complete the enclosed information sheet and return it in the envelope provided to your child's school. This information will tell me a bit about your child.

Child participation in the project

The aim of this project is to study worries in children and to identify the types of thoughts they might have about attending school. It is hoped that the results from this study can be used by health and educational services that want to know how best to help children who do not attend school.

I will be measuring children's worries using a questionnaire. The questionnaire is designed for use with children and requires the child to answer "yes" or "no" to statements such as, "I am afraid of lots of things", and "Often I feel sick in my stomach".

Children's thoughts will be measured using two questionnaires. The first questionnaire looks at thoughts that many children might have, e.g. "I'll never be as good as other people are". The second questionnaire looks at how well children think they can cope with going to school, e.g. "How sure are you of being able to do things in front of your class or group?" Both questionnaires will ask the child to rate their answers on a scale of 1-5.

One final brief questionnaire will also be given to determine whether your child feels depressed, as children who refuse school commonly feel both anxious and depressed. Your child will rate answers to statements such as "I feel like crying", as "most", "sometimes", or "never".

I would work with your child at their school during school hours. I would spend no more than 30 minutes with your child and your child would only need to take part on one occasion.

Parent information letter (school attendee group)

I will only work with your child if he or she is willing. Your child will be told they can leave the session whenever they wish. To reassure you, all the information I collect will remain completely confidential. If you would like to, you can view the questionnaires that I will use with your child before they complete them.

What will happen to the results of the project?
The results of this study will be submitted as part of my Doctorate in Clinical Psychology. In addition, they will be submitted for publication in the scientific literature. Your child will not be identified in any publication.

Who has reviewed the study?
The Department of Psychology Research Ethics Committee, University of Southampton, has reviewed this study. If you have any questions about your child's rights as a participant or you feel your child has been placed at risk, you may contact the Chair of the Ethics Committee, Department of Psychology, University of Southampton, Southampton, SO17 1BJ. Telephone: 02380 593995.

Contact for further information
A summary of the research project can be supplied to you upon request once the study is completed. To request a summary or if you have any questions please contact:
Sarah Rogers, Trainee Clinical Psychologist, Department of Clinical Psychology, Building 44 (Shackleton), University of Southampton, Highfield, Southampton, SO17 1BJ.
E-mail: sr701@soton.ac.uk OR leave a message on: 02380 595321.

I CANNOT WORK WITH YOUR CHILD UNLESS I HAVE YOUR WRITTEN PERMISSION.

If you are willing to take part in this project please fill out the attached consent form and child's information sheet and return them in the envelope provided, to your child's school.

Thank you.

Yours sincerely,

Sarah Rogers

Sarah Rogers

Appendix D

Demographic information sheet (school attendee group)

Office Use Only
Participant no. _____

A Study Looking at Worry and The Thoughts Young People Have about School

CHILD INFORMATION SHEET

Please complete the following information about your child. All information will remain strictly confidential.

Child's name _____ Male/Female (please delete)

Date of Birth _____

School Year (e.g. Year 10) _____

Does your child have any medical diagnoses (e.g. anxiety, depression, M.E.)? YES/NO?

If yes, please state _____

Your name _____

Your address _____ ☐

Telephone no. _____ ☐

Would you prefer to be contacted by letter or telephone call? Please tick the appropriate box.

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Appendix E

Child consent form

A Study Looking at Worry and The Thoughts Young People Have about School

CONSENT FORM

I am looking at the thoughts and worries young people have about going to school. I need your help to do this project.

I will be asking you to help me fill in 5 questionnaires. Some questions will need you to answer "Yes" or "No", and other questions will need you to circle numbers on a scale like this: 1_____2_____(3)_____4_____5.
There are no right or wrong answers to the questions.

Nobody, except the researchers, will see the answers that you give.

You can ask me any questions if you do not understand what to do.

It is up to you whether you choose to take part or not. I would understand if you decided not to.

Thank you very much.

If you agree to help me, please sign your name below.

Signature _____

Appendix F.

Table displaying normality and heterogeneity of variance statistics.

	Kolmogorov-Smirnov test of normality			Levene's test of equality of variances			
	Statistic	df	Sig.	F	df 1	df 2	Sig.
RCMAS Total							
Total sample	.143	28	.150	.011	1	26	.916
School refusal group	.154	14	.200				
School attendee group	.219	14	.067				
CATS Total							
Total sample	.155	28	.200	.641	1	26	.431
School refusal group	.177	14	.200				
School attendee group	.204	14	.117				
CATS Physical							
Total sample	.190	28	.011	5.843	1	26	.023
School refusal group	.217	14	.073				
School attendee group	.15	14	.200				
CATS Social							
Total sample	.201	28	.005	2.834	1	26	.104
School refusal group	.233	14	.038				
School attendee group	.217	14	.074				
CATS Personal							
Total sample	.261	28	.000	4.894	1	26	.036
School refusal group	.216	14	.076				
School attendee group	.232	14	.039				

Appendix F continued.

Table displaying normality and heterogeneity of variance statistics.

	Kolmogorov-Smirnov test of normality			Levene's test of equality of variances			
CATS Hostility							
Total sample	.161	28	.060	.161	1	26	.691
School refusal group	.173	14	.200				
School attendee group	.246	14	.022				
SEQSS Total							
Total sample	.145	28	.137	3.208	1	26	.085
School refusal group	.164	14	.200				
School attendee group	.206	14	.111				
SEQSS Academic							
Total sample	.230	28	.005	3.595	1	26	.069
School refusal group	.177	14	.200				
School attendee group	.195	14	.158				
SEQSS Separation							
Total sample	.095	28	.200	2.990	1	26	.096
School refusal group	.127	14	.200				
School attendee group	.121	14	.200				
Birleson							
Total sample	.176	28	.027	.058	1	26	.811
School refusal group	.147	14	.200				
School attendee group	.240	14	.028				

Appendix G.

Parent comments on the reasons for their child's school refusal.

1. M never had the energy due to his anorexia.
2. Feelings of not fitting in. Low self-esteem, etc.
3. Unable to fit in. Unable to cope with the environment.
4. Learning difficulties (dyslexia). Don't think some teachers understand.
5. Certain teachers. P is so behind at school. P is finding it hard at school.
6. Because he doesn't like school – but has to go.
7. He won't tell me his reasons.
8. Depression, anger, paranoid.
9. Other children picking on him.