University of Southampton

All in the Mind's Eye? The Observer Perspective and the Applicability of the Adult Models of Social Phobia to Children

(Volume 1 of 1)

Jacqueline R. Boyle BSc (Hons)

This Thesis is Submitted in Partial Fulfilment of the
Degree of Doctor of Clinical Psychology

School of Psychology
Faculty of Medicine Health and Life Sciences

March 2006

Word count: 19, 000

Disclaimer Statement

I the undersigned confirm that the work that I have presented as my thesis is entirely my own work. Reference to, quotation from, and discussion of the work of any other person has been correctly acknowledged within the work in accordance with University of Southampton guidelines for production of a thesis.

Signed: [redacted] Date: March 2016.

Jacqueline Boyle

Thesis Abstract

Social phobia is one of the most common anxiety disorders in childhood. However, there is currently no widely used and accepted model of social phobia for young people. In the literature review, the adult models of social phobia are discussed and research based on them reviewed. Current models of anxiety and social anxiety in children are then considered and the research conducted on children is described. Comparisons between the adult and child models are made and suggestions for a more comprehensive model of social phobia for children, based on the Clark and Wells (1995) adult model of social phobia, are proposed.

As part of their model, Clark and Wells (1995) propose that negative self-images, often visual images seen and recalled from the perspective of an observer (OP), are an important maintaining factor in social phobia. The OP can be contrasted with a field perspective (FP; where visual images are recalled from an individual's perspective). The present empirical study explored the relevance of the OP to children. Fifty-eight children (aged 7 – 14 years) recalled memories of social and physical situations and were asked to label the perspective they used (OP or FP). Social anxiety, memory distress and memory age were also measured. Children did recall OP memories. OP was not related to child's age, social anxiety or social memories. Interestingly, OP was related to older social memories, but not to memory distress. Possible reasons for the findings and the potential implications for the models of social phobia in child development are discussed.

Contents

Literature Review

How useful are the current adult models of social phobia in explaining the maintenance of social anxiety in children and adolescents?

Empirical Paper

Observer Perspective Memories in Children:

Are they related to social anxiety and social memories?

List of Tables and Figures Page

Acknowledgements

I would like to give special thanks Dr Lusia Stopa and Dr Julie Hadwin for their much valued support and guidance throughout this thesis. Thank you to Mr Watson and Mrs O'Hara for allowing me into their schools to recruit participants and for their help with organising the practical arrangements of the study in the schools. I would also like to thank the parents who gave consent to their children participating in this study, and a big thank you to the children and adolescents who took part.

Literature Review*

How useful are the current adult models of social phobia in explaining the maintenance of social anxiety in children and adolescents?

Running head: Social Anxiety and Children

Jacqueline R. Boyle

Correspondence regarding this article should be addressed to Jacqueline Boyle, Doctoral Program in Clinical Psychology, Shackleton Building (44), University of Southampton, Highfield, Southampton, SO17 1BJ

* Applying American Psychological Association (2001) guidelines, prepared for submission to Psychological Bulletin (see Appendix A for Guide for Authors)

Abstract

Social phobia is one of the most common anxiety disorders in childhood. However, there is currently no widely used and accepted model of social phobia for young people. In this review, the adult models of social phobia are discussed and research based on them reviewed. Current models of anxiety and social anxiety in children are then considered and the research carried out on children is described. Comparisons between the adult and child models are then made and suggestions for a more comprehensive model of social phobia for children, based on the Clark and Wells (1995) adult model of social phobia, are proposed. Possible avenues for future research are outlined.

Key Words: Social, Anxiety, Phobia, Models, Children, Adolescents

Introduction

Since its inclusion in DSM-III (APA, 1980), there has been a surge of research into social phobia in adults, including the development of theoretical models that outline the processes that occur during social interactions and in cognitive-behavioral therapies that provide interventions based on these models (Heimberg & Juster, 1995). There has, however, been relatively little research into the disorder in children despite social phobia being one of the most prevalent anxiety disorders in childhood (Verhulst, Van der Ende, Ferdinand, & Kasius 1997). Research into the disorder is important as social phobia has a high rate of comorbidity with other disorders (Last, Hersen, Kazdin, Orvaschel, & Perrin, 1991) and often interferes with children's development and future quality of life, such as schooling, getting a job and finding a partner (APA, 1994; Last & Strauss, 1990).

This review will consider current theory and research in social phobia to highlight the need for more research in children who present with this disorder. It will argue that we need to understand whether there are similar underlying mechanisms in adult and child populations. The review will explore theoretical models and empirical research on social phobia in adults and children. It will consider the two main adult models of social phobia (Clark & Wells, 1995; Rapee & Heimberg, 1997) and will outline key empirical findings that support these models. It will go on to look at models and research in childhood anxiety, and in social phobia in particular. It will compare and contrast the theoretical approaches developed to understand social phobia in adults with those developed for children. Following a review of the literature, suggestions will be made on how to develop models of social phobia that allow an exploration of the potential continuity of underlying mechanisms across childhood and adolescence and into adulthood. Finally, the

clinical implications of such a model and consideration for future research will be addressed.

Defining social phobia in children

Social phobia in children and adults is defined as "A marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others. The individual fears that he or she will act in a way (or show anxiety symptoms) that will be humiliating or embarrassing" (DSM-IV, APA, 1994, *p.* 416). Children and adolescents with social phobia report similar fears to those reported by adults, namely, fear of public speaking, eating or writing in public, using public toilets, speaking to those in authority and informal interactions (Beidel & Turner, 1998). Of note, the most frequent cause of distress in children is unstructured peer interaction (Beidel, 1991). Individuals with social phobia avoid social interactions where possible, but as this is not possible for children and adolescents who must attend school, school related activities are endured with intense distress (Beidel, Turner, & Morris, 2000).

Children may express their distress by crying, having tantrums, freezing or hiding away, speaking quietly, stuttering, poor eye contact, refusing to perform tasks and pretending to be ill (Beidel, 1991; Beidel & Turner, 1998). Adolescents and adults may experience panic attacks. Whilst adults might consider their fear to be excessive or unreasonable, children may not believe this to be the case (APA, 1994).

The different forms in which distress is expressed can be understood to reflect age-related forms of expression. Another age-related difference reflected in the diagnostic criteria concerns social skills: "In children, there must be evidence of the capacity for age-appropriate social relationships with familiar people and the

anxiety must occur in peer settings, not just in interactions with adults" (APA, 1994, *p*.416). This distinguishes social anxiety from a fundamental lack of social skill or a developmental disorder. These symptoms need to be present for at least six months for a diagnosis of social phobia, as it is common for all children and adolescents to experience mild, transient social anxieties (Ollendick & Ingman, 2001). Some studies suggest that children's concerns around social evaluation increase as children approach adolescence (Ollendick, King, & Frary, 1989). Other studies have found a relatively constant fear of evaluation between 6 and 16 years (Campbell & Rapee, 1994). The mean age of onset for social phobia is reported to be around 12 years (Strauss & Last, 1993). However, Rapee (1995) argues that this mean figure is misleading as it detracts from the high proportion of younger socially anxious children (Rapee, 1995). Other studies cite a bimodal age of onset, before 5 years and in early adolescence (Schneier, Johnson, Hornig, Liebowitz, & Weissman, 1992). Some studies have found that young children (around 6 years) report higher levels of social anxiety and fear of negative evaluation compared with those in middle-childhood, around 12 years (La Greca, 1999).

In summary, the features of social phobia in children are similar to those in adults, however the expression of anxiety may be determined by age-related characteristics. Crucially, social phobia persists in children and adolescents despite repeated exposure to feared social interactions and this suggests that something prevents children from habituating to and overcoming their phobia. Clark and Wells (1995) developed a cognitive model to explain the persistence of social phobia in adults (Clark, 2001). A similar model has been developed by Rapee and Heimberg (1997). These models are described next to provide a basis for determining their suitability in accounting for the persistence of social phobia in children.

Adult models of social phobia

The most influential models of social phobia, in terms of generating testable hypotheses and directing current treatments, are the recent cognitive theories of Clark and Wells (Clark, 2001; Clark & Wells, 1995) and Rapee and Heimberg (1997). These models describe the processes that occur when a person with social phobia enters a feared situation but they also consider the effects of anticipatory and post-event processing.

Both models propose that individuals with social phobia have developed assumptions about themselves and other people (e.g. I must always say something interesting or people will think I am stupid). Such assumptions make individuals prone to believe that they are in danger of being humiliated and rejected. Entering a social situation activates these assumptions, leading the person to interpret ambiguous social cues as signs of negative evaluation (Clark, 2001; Rapee & Heimberg, 1997).

The models propose three key processes that contribute to the maintenance of social phobia. First, that information processing biases occur when individuals enter and think about social anxiety provoking situations. Here, they argue that individuals direct a significant proportion of their attention to scrutinizing their own behavior and levels of anxiety, which prevents them from processing positive social feedback and hinders their social performance as it directs attention away from their conversation partner. As part of this self-focused attention, the models propose that individuals generate an impression of how they think that other people view them. Often this impression is a visual image seen from an observer or audience perspective (in contrast to a field perspective, where the individual recalls seeing the

world through his/her own eyes). Rapee and Heimberg's (1997) model includes a comparison between the generated negative self-image and the person's perceived standards of expected performance. Rapee and Heimberg (1997) also include the use of past experiences and memories of general appearance in the formation of the self-image.

In addition to self-focused attention, individuals are proposed to negatively process information about other people's behavior in a way that makes them infer that other people are negatively evaluating them. Whilst the models suggest attention is drawn both outwardly to threat in social situations and inwardly onto the self (such as self-impression, observer perspective, anxiety symptoms, thoughts), the models differ slightly in their views on the amount of attention that is allocated to external threats. Clark and Wells (1995) emphasize that most attention is self-focused resulting in reduced processing of external information, whereas Rapee and Heimberg (1997) propose that attention is allocated to both sources equally.

Second, the models suggest that adults use safety behaviors, which are conscious attempts to prevent feared catastrophes occurring. For example, an individual who fears that other people will evaluate him as boring may turn away from people, to prevent them from including him in a conversation. Ironically, safety behaviors can make the person's fears more likely to occur. In the above example, such avoidance might lead other people to think the person is rude and unfriendly. Safety behaviors also maintain the person's self-focused attention and lead the person to believe that his/her safety behavior prevented or minimized the feared catastrophe.

Third, anticipatory anxiety and post-event analyses are suggested to maintain negative thoughts and anxiety as individuals selectively retrieve negative information

about themselves and their social performances. They also lead to negative predictions about their performance in future social events. There is growing empirical support for the processes described above and we turn to this literature next.

Research in adults with social phobia

This section considers key empirical findings in relation to the maintaining processes outlined in the adult models. Because this literature has been discussed in depth elsewhere, (e.g. see Alden & Taylor, 2004, Bögels & Mansell, 2004, and Hirsch & Clark, 2004, for reviews) the focus here is to provide a brief overview of key findings that support the models.

Information processing biases

The models propose that socially anxious individuals judge feared social interactions as threatening and will process social information in a way that supports their negative assumptions that they are undesirable and that other people think badly of them. The models assume that individuals will feel ill-equipped to deal with the interaction. There is evidence that patients with social phobia over-estimate the probability of negative social events. When socially phobic patients are asked to make probability estimates about social interactions, they predict that they will experience more negative than positive ones (Lucock & Salkovskis, 1988). These predictions were specific to social events (Foa, Franklin, Perry, & Herbert, 1996). Patients with social phobia also gave higher cost ratings to negative social events (e.g. McManus, Clark, Hackmann, 2000). Whilst it is possible that these estimates are realistic, there is some evidence to suggest that they may be over-estimates, as probability and cost estimates decrease after treatment (Foa et al, 1996; Lucock &

Salkovskis, 1988; McManus et al., 2000). Furthermore, there is evidence from studies using vignettes of social interactions that individuals with social anxiety and social phobia make negative interpretations about ambiguous social information and catastrophically interpret mildly negative social information (e.g. Amir, Foa, & Coles, 1998; Stopa & Clark, 2000). These interpretations were specific to social situations (Stopa & Clark, 2000), also to themselves, and were only made by individuals with social phobia (Amir et al., 1998).

These studies are useful in demonstrating that socially anxious individuals expect social events to be negative and that they evaluate social information negatively. However, these studies measure interpretations made after the event rather than the on-line processing that takes place during the event. When making on-line interpretations, non-anxious individuals make non-threat interpretations, whereas socially anxious individuals do not (e.g. Hirsch & Mathews, 2000; Hirsch, Mathews, Clark, Williams, & Morrison, 2003). This suggests that socially anxious individuals are attending only to perceived threats and not to other aspects of the situation. Hirsch et al. (2003) found that when individuals low in anxiety are trained to hold negative self-images, they also failed to make non-threat interpretations. This result suggests that negative self-images interfere with the processing of information in a non-threatening way. This may happen because, by holding a negative self-image, individuals are more likely to direct thoughts away from positive information that is incongruent with their current thoughts and self-view. The authors of the study also suggest that holding negative images may take up working memory capacity, either as a result of holding the image itself (Baddeley & Andrade, 2000) or as a result of the anxiety caused by the negative images (Eysenck & Calvo, 1992).

Reduced working memory capacity reduces the participant's processing ability for the complex experimental task but not for the more simple baseline task.

Experiments using homographs that could be interpreted as having a social threat or nonthreat meaning, suggest that patients with social phobia make initial threat interpretations that are then inhibited (e.g. Amir, Foa, & Coles, 1998a). Amir et al. (1998a) asked patients with social phobia and non-anxious controls to read non-threat sentences. Half of these sentences ended in a homograph. Half the homographs had a social-threat meaning (e.g. "she wrote down the mean" *p*. 286). After each sentence, participants were then presented with a word for either 100 or 850 ms and participants had to decided whether the words were related to the sentence. In comparison with the control group, at 100 ms, patients with social phobia took longer to decide whether cue words were related to the ambiguous social homograph sentences than they took to decide whether cue words were related to non-homograph sentences. The authors argued that the socially anxious individuals had already made a threatening interpretation of the material whilst reading the ambiguous social homograph, and were therefore vigilant for threat. As there were no differences in patient's decision times for homographs and non-homographs by 850 ms, the authors suggested that by 850 ms patients have had time to inhibit threat interpretations. This relates to the vigilance-avoidance hypothesis (e.g. Mogg, Bradley, de Bono, & Painter, 1997), where it is proposed that socially anxious individuals are initially vigilant to threat, but then subsequently avoid it. This is a separate debate and although it will be referred to in the next section, it is beyond the scope of this review to discuss it in depth here. However, closer examination of Amir et al.'s (1998) results show that at 100 ms, both groups took equally as long to decide whether words related to social homographs. The patients with social phobia cannot

therefore be described as having initial vigilance to threat. At 850 ms, the social phobia patients were faster than the nonanxious controls at deciding whether social threat words were related to homograph sentences. Furthermore, the patients' decision making speed on the social threat task was equal to their decision making speed for the non-homograph sentences, which is a much easier task and therefore should be quicker. This suggests that, at 850 ms, individuals with social phobia tend to interpret ambiguous social homograph as threatening, which is why their decision times were quicker.

Several experiments suggest that socially anxious individuals are overly critical of their own social performance (Alden & Wallace, 1995; Rapee & Lim, 1992 and Stopa & Clark, 1993). In some studies, independent observers assessed no differences between the social performance of individuals with and without social phobia (e.g. Rapee & Lim, 1992) whereas in other studies, observers rated the performance of social phobia patients as worse than non-clinical controls (e.g. Stopa & Clark, 1993). However, in all studies, individuals with social phobia and social anxiety rated their own performance even more negatively than the observers did. This suggests that they do have negative interpretation biases for their own behavior and perceive themselves as low in social competence, therefore potentially "ill-equipped" to deal with social interactions.

In summary, individuals with social phobia make negative interpretations about ambiguous social information and are overly critical of their own social behavior. Whilst in social situations, anxiety may be maintained because socially anxious individuals do not make non-threat interpretations. This could be a result of holding and attending to a negative self-image, which may lead individuals to direct thoughts and attention away from information that is incongruent with their self-

image, and/or be a consequence of a compromised working memory. The next section considers the findings from studies investigating attention in more detail.

Attention

The models predict that socially anxious individuals will attend to external signs of potential threat during social interactions, such as other people's behavior, and to internal signs, such as anxiety symptoms, thoughts, emotions, their own behaviors and appearance. Experiments have used various paradigms to assess attention, including modified Stroop, modified dot-probe, visual tracking and detection tasks. The findings are conflicting, with some studies concluding that socially anxious individuals show a hypervigilance towards threat, some studies concluding that individuals cannot disengage from threat, others concluding that attention is directed away from threat, and recent studies suggesting that attention may show a vigilance-avoidance pattern.

Findings from modified Stroop tasks have been interpreted as evidence that attention is directed towards threat. The majority of these studies have found that socially anxious participants are slower at color naming socially threatening words (i.e. negative evaluations or signs of anxiety) compared to non-threat words. This has been interpreted as showing that information processing resources are prioritized towards the meaning of the threatening word, rather than its color (e.g. Maidenberg, Chen, Craske, Bohn, & Bystritsky, 1996; Spector, Pecknold, & Libman, 2003). However, the allocation of attention is inferred in these tasks. As several writers have highlighted (e.g. Bogels & Mansell, 2004; MacLeod, Mathews, & Tata, 1986), the effects found on the Stroop task could be a result of other processes such as preoccupation with threatening words (Wells & Matthews, 1994), anxiety resulting

from the presence of threatening words (MacLeod et al., 1986) or avoidance of threatening words (e.g. de Ruiter & Brosschott, 1994).

The modified dot-probe task is thought to be a more direct measure of attention (MacLeod, et al., 1986) because it uses response speed as an indication of attention allocation, assuming that individuals will be quicker at responding to a probe when it occurs in the same location as their current focus of attention. The findings from most modified dot-probe studies suggest that attention is biased towards threatening stimuli, for example, angry faces in preference to neutral or happy ones (e.g. Musa, Lépine, Clark, Mansell, & Ehlers, 2003; Mogg, Philippott, Bradley, 2004; Pishyar, Harris, & Menzies, 2004; Vassilopoulos, 2005). By varying the length of time between the stimuli and the presentation of the probe, or the location of the probe in relation to the stimuli, some studies have concluded that after initial attention to threat, attention is then either directed away in a vigilance-avoidance pattern (Vassipoloulos, 2005), continues to be directed towards threat, with participants having difficulty disengaging (Amir, Elias, Klumpp, & Przeworski, 2003), or is neither directed towards or away (Mogg et al., 2004).

However, recently studies have compared the effects of providing participants with a choice of stimuli. One such study suggests socially anxious participants direct attention away from pictures of potential threat, such as faces, towards non-threatening pictures, such as household objects (Chen, Ehlers, Clark, & Mansell, 2002). This has been interpreted as a preference for avoiding threat. Recently, two studies provided evidence to suggest that individuals with social phobia or high speech anxiety show a preference for attention to internal stimuli over external (Mansell, Clark, & Ehlers 2003; Pineles & Mineka, 2005). This is described in more detail towards the end of this section when internal focus of attention is

considered. Although, whether social anxious participants still attend to internal information when the alternative is an external non-threatening stimulus, has not been investigated.

Visual search experiments also provide mixed findings, with some studies providing evidence that, compared with low socially anxious individuals, those with high social anxiety are quicker at detecting schematic drawings and photographs of angry faces, than happy faces (Gilboa-Schechtman, Foa, & Amir, 1999; and experiment five in Pernilla, Lundquist, Karlsson, & Ohman, 2005), and other experiments finding no differences between high and low socially anxious participants (Esteves, 1999; experiment one in Pernilla et al., 2005). However, experiments using more naturalistic methods, where participants are asked to press buttons to indicate their detection of negative and positive behaviors in an audience whilst giving a speech, have found that high socially anxious participants show a bias in detecting negative behaviors in an audience (Veljaca & Rapee, 1998) or in detecting members of the audience who display negative behaviors, even if they cannot describe these behaviors in detail (Perowne & Mansell, 2002). In contrast, low socially anxious participants, are more likely to detect positive behaviors (Perowne & Mansell, 2002; Veljaca & Rapee, 1998). However, detection experiments have been criticized because most of them specifically instruct participants to look for such stimuli. They are, therefore, not the most valid measure of where participants' attention would naturally be drawn (Bögels & Mansell, 2004).

Eye-tracking experiments are the most direct means of assessing attention as they can monitor the location and duration of an individual's eye-gaze and do not require a response from participants (Bögels & Mansell, 2004). Using this equipment, Garner, Mogg, and Bradley (2006) showed participants high and low in

social anxiety two pictures simultaneously on a computer screen. These picture pairs were either of happy-neutral faces, angry-neutral faces and neutral faces-objects. Garner et al. (2006) found that when high socially anxious individuals were under threat of having to give a speech, they focused their attention on emotional faces quicker than low socially anxious individuals, but for a briefer duration. This was taken as evidence of a vigilance-avoidance pattern of attention, and is in keeping with findings of Perowne and Mansell (2002) described earlier.

There is considerable evidence that socially anxious individuals report higher levels self-focused attention than low socially anxious individuals (e.g. by scoring higher on public self-consciousness on the Fenigstein, Scheier, & Buss, 1975, self-consciousness scale) particularly when in feared social interactions (e.g. Bögels & Lamers, 2002; Perowne & Mansell, 2002). Only one study by Stopa and Clark (1993) found no difference in reported attention between social phobics and non-patient controls. Furthermore, socially anxious individuals recall fewer details of recent social interactions compared to low socially anxious individuals. This suggests that high socially anxious individuals focus their attention more on themselves than on the environment during interactions. The greater the reported level of self-focused attention, the less information is recalled about their conversational partners (e.g. Hope, Heimberg, & Klein, 1990; Mellings & Alden, 2000). Mansell et al.'s (2003) study provides further support for this hypothesis. They told participants they would have to give a speech and then measured participants' attention to changes in internal and external information, whilst they looked at a VDU showing a series of threatening and non-threatening stimuli (faces and household objects respectively). An external stimulus was superimposed on each picture. The internal stimulus was a pulse to the finger which participants were told represented significant physiological

changes. The relative latency to detect an external stimulus verses an internal stimulus was used to calculate the balance of attention. High speech anxious individuals showed an internal attentional bias whereas low speech anxious individuals did not.

Several studies have attempted to manipulate levels of self-focused attention in an effort to investigate whether this plays a causal role in maintaining social anxiety. Self-focused attention has been manipulated in numerous ways (e.g. by increasing perceived pulse rate), and has generally been found to increase anxiety in socially anxious individuals (Wells & Papageorgiou, 2001; Woody, 1996), and also in low socially anxious individuals (Bögels & Lamers, 2002; Woody & Rodriguez, 2000).

In summary, most studies suggest that socially anxious individuals are quick to attend to external threat, but their attention may not remain there and the information obtained may be sparse. Socially anxious individuals report high levels of self-focused attention and show a preference towards changes in internal over external threat. Furthermore, self-focused attention has been shown to increase anxiety, suggesting that it plays a role in maintaining the disorder. The self-impressions individuals create as part of this self-focused attention are considered next.

Sense of self and images from the observer perspective.

The models assert that as part of this self-focused attention, individuals generate a distorted impression of how they think that other people perceive them. This is often in the form of an image that individuals think is a realistic picture of how other people see them. This image is usually negative and distorted and is often

seen from an observer perspective. The models suggest that individuals may also recall distorted images of themselves during anticipatory and post-event processing. This self-impression/image is thought to be important because it reinforces and maintains negative beliefs about the self.

There is growing evidence for the importance of these negative images. Studies have found that individuals with social phobia use the observer perspective more frequently than non-patient controls (e.g. Hackmann, Surawy, & Clark, 1998). Individuals with social phobia are more likely to recall distressing situations using a negative observer perspective image. However, moderate to low social anxiety situations were more likely to be recalled using a field perspective (Coles, Turk, Heimberg, & Fresco, 2001). Recent evidence suggests that observer perspective images that contain negative content may play a causal role in maintaining social anxiety. For example, when individuals with high social anxiety are instructed to use an observer perspective whilst in an experimental social situation (e.g. Spurr & Stopa, 2002; Wells & Papageorgiou, 1998) or when they are asked to maintain their usual negative image during a social task (e.g. Hirsch, Clark, Mathews & Williams, 2003; Hirsch, Maynen, & Clark, 2004), they report higher levels of anxiety, more negative thoughts and performed less well. This has potential implications for the treatment of social anxiety. Because the observer perspective images held by socially anxious individuals contain overly negative and distorted content, cognitive-behavioral techniques recommend showing clients video-tapes of their social performance, so that perceived observer perspective images can be realistically appraised (Clark, 2004; Hackmann et al., 1998). Using these techniques has been shown experimentally to improve self-performance ratings in socially anxious individuals (Harvey, Clark, Ehlers, & Rapee, 2000).

In summary, there is a small but significant body of evidence that demonstrates that individuals with high levels of social anxiety/social phobia frequently use observer perspective images, and when these images have negative content they increase anxiety and negative thoughts. The next section reviews evidence for anticipatory and post-event processing.

Anticipatory and post-event processing

The models postulate that individuals ruminate before and after social events, and that this is likely to increase anxiety and maintain distress, encourage avoidance, and strengthen negative self-beliefs. Overall, there is growing evidence that socially anxious individuals engage in negative anticipatory processing. For example, information from a study using semi-structured interviews showed that socially anxious individuals were more likely to recall past social failings, dwell on avoidance mechanisms, make catastrophic predictions, engage in anticipatory safety behaviors and generate negative observer-perspective images before social events (Hinrichsen & Clark, 2003).

Experimental studies also provide evidence for the negative effects of anticipatory processing. Instructing high and low social anxious individuals to dwell on past failures, negative self-images and predictions, resulted in increased anxiety before and during a social interaction (Hinrichsen & Clark, 2003). In a further experiment, participants learnt a variety of trait words. Subsequent to being informed that they would later give a speech, socially anxious individuals recalled fewer positive and more negative descriptors (Mansell & Clark, 1999). The authors suggested that anticipatory anxiety causes socially anxious individuals to retrieve

negative impressions about their observable self (but see Mellings & Alden, 2000, for contradictory evidence).

A few studies have investigated post-event processing in socially anxious individuals. They show that socially anxious individuals engage in more frequent post-event rumination than low socially anxious individuals (Mellings & Alden, 2000; Rachman, Grüter-Andrew, & Shafran, 2000) even when depression is statistically controlled for (Edwards, Rapee, & Franklin, 2003). Furthermore, post-event rumination by socially anxious individuals frequently contains negative thoughts (e.g. Kocovski, Endler, Rector, & Flett, 2005).

Abbott and Rapee (2004) showed that individuals with social phobia continued to have negative thoughts about a speech they gave one week after the event, whereas non-anxious individuals showed increased positivity about their speech. Although one study suggests rumination may be functional as socially anxious individuals rated their post-event memories as calming, rumination was also likely to have maintained their negative beliefs, as individuals also rated their thoughts as negative and shameful (Field & Morgan, 2004). Furthermore, a psychometric study showed that post-event rumination in socially anxious individuals interferes with their concentration and was associated with social avoidance (Rachman et al., 2000). Mellings and Alden's (2000) experiment found frequency of post-event rumination predicted recall of negative self-related information. These studies suggest that negative post-event rumination plays a role in maintaining social anxiety. Indeed, following cognitive-behavioral treatment, negative rumination decreased and the social phobic's opinions about their performance increased (Abbott & Rapee, 2004).

In summary, there is consistent evidence that socially anxious individuals engage in pre-event and post-event rumination and that the negative content of these thoughts maintains the phobia. The next section considers the effects of anxiety, self-focused attention, behaviors and social skills on social performance.

Interpersonal processing: Social Performance, Social Skills and Safety Behaviors.

Studies show that many socially anxious individuals are less assertive, use less eye contact, disclose less, speak for shorter durations and show more anxiety than non-anxious individuals (e.g. Glass & Arnkoff, 1994; Glass & Furlong, 1990; Meleshko & Alden, 1993). Several studies have found that other people may be less interested in becoming further acquainted with socially anxious individuals following interactions (e.g. Meleshko & Adlen, 1993). Traditionally, these behaviors have been attributed to social skills deficits (e.g. Segrin, 2001). However, the adult models suggest that, whilst some individuals may have fundamental social skill deficits, self-focused attention, anxiety and safety behaviors can impede social performance. Safety behaviors are behaviors that individuals perform during situations, with the intention that these behaviors will prevent feared outcomes.

There is convincing evidence that socially anxious individuals use safety behaviors. Clark (1999) identified several safety behaviors in a social phobia client, such as wearing scarves to hide blushing and offering alternative explanations for a red face, such as "I'm recovering from the flu" (*p*.58). Experiments show that socially anxious individuals disclosed less when they believed that they were being negatively evaluated (Alden & Bieling, 1998; Depaulo, Epstein, & LeMay, 1990), but not when they believed they were being positively appraised (Alden & Bieling,

1998). Furthermore, there is some evidence that safety behaviors maintain social phobia as intentional dropping of such behaviors enhanced treatment effects. In one study, stopping safety behaviors resulted in a decrease in anxiety and a decrease in beliefs in outcome fears (Wells, Clark, Salkovskis, Ludgate, Hackmann, & Gelder, 1995). In another study, significant improvements on a social fears and anxiety inventory were found when therapy taught individuals to stop using safety behaviors, compared to when it did not (Morgan & Raffle, 1999).

In summary, there is consistent evidence that safety behaviors interfere with social performance and maintain beliefs. The extent to which safety behaviors impair performance relative to social skill deficits is unclear, and may vary from individual to individual.

Summary of research findings in adults with social anxiety

There is growing empirical support for the processes outlined in the adult models of social phobia. The research suggests that individuals with social phobia engage in biased information processing: they expect events to be negative, interpret ambiguous social information in a negative way, attend to signs of social threat/negative evaluation and have increased self-focused attention compared to non-anxious individuals. Self-focused attention has been related to increases in anxiety, negative thoughts and reduced information gathering from the social interaction. There is evidence that socially anxious individuals generate self-impressions, which are often visual images from an observer perspective. These images are usually negative and have been shown to increase anxiety. There is also some evidence that individuals engage in safety behaviors when they expect to be

negatively evaluated. Anticipatory and post-event processing increase anxiety and negative thoughts.

The sections above have highlighted the importance of a number of maintaining factors in adults with social phobia. So far, this review has identified two reasons why analogous processes may exist in children and adults with social phobia. First, social anxiety has a similar presentation in adults and children, crucially, both do not naturally habituate to their fears despite repeated exposure. Second, many adults report that their social fears started in childhood (e.g. Hackmann, Surawy, & Clark, 1998; Ost, 1985). The next section will explore models that have been developed to explain anxiety and social anxiety in children, so that the adequacy of these models in explaining childhood social anxiety can be evaluated.

Childhood models of anxiety and social phobia

Anxiety in children is more diffuse than it is in adults, with children giving a more comorbid presentation (e.g. Strauss & Last, 1993). As a result, generic models of anxiety are often used with children. It is important to examine, nevertheless, how well these generic models explain social anxiety in children. Three models will be described here. First, Rapee's (2001) model of the development and maintenance of general anxiety will be described. This model is frequently cited in the literature, used clinically, and can be applied to any anxiety disorder. Two more specific models of social phobia will be presented: a model developed by Spence, Donovan, and Brechman-Toussaint (1999) that describes the development and maintenance of social anxiety in children, and a recently developed model by Rapee and Spence (2004), that describes the etiology of social phobia.

Rapee's (2001) model suggests that anxious children have an "anxious vulnerability" (P.494), which consists of a high level of arousal, a low threshold for perceiving danger, and an avoidant coping style. For some children, these characteristics are genetically determined and this is more likely to be the case if the parent has anxiety. The model proposes that parents, especially if they are anxious, are likely to contribute to the development and maintenance of anxious vulnerability through protecting anxious children from threat and accepting their avoidant strategies. Anxious parents may also model anxious perceptions of, and responses to situations. The model proposes that these factors reinforce children's views of the world as threatening, their avoidant style and their view that they cannot cope with threat (Rapee, 1997). As children grow, the model proposes that anxiety is further maintained and developed through interactions with other anxious youths who share their anxious views, or through isolation from peers, who challenge their views. Major events and stressors will increase stress and are likely to have a lasting impact given the child's anxious vulnerability. A final stressful event then triggers an anxiety disorder.

Following the development of adult models of social phobia, new and more specific childhood models have been developed. One model of social phobia, proposed by Spence et al. (1999), provides a general description of the potential development and maintenance of social anxiety in childhood. This model suggests that social phobia in children is maintained by a cycle, whereby social skill deficits result in unsuccessful social interactions. This leads children to anticipate that social situations will be unrewarding, and to have negative thoughts about social situations and their own ability to ensure an effective social outcome. These negative thoughts generate anxiety, which leads to avoidance of future social situations, thus preventing

the development of social skills and perpetuating the cycle of anxiety. They suggest that social phobia may develop if any of these features are true. Recently, Rapee and Spence (2004) suggested that, like the adult models, negative social experiences might lead to extreme self-focused attention, and hypersensitivity to negative feedback from others.

A recent model of the etiology of social phobia (Rapee & Spence, 2004) illustrates the continuity of social anxiety from childhood to adulthood. This model builds on Rapee's (2001) and Spence et al.'s (1999) childhood models of anxiety and social anxiety. They suggest that social anxiety lies on a continuum with a total lack of anxiety at the lower end, generalized social phobia at the higher end and extreme social withdrawal at the top. A combination of genetic factors, such as neuroticism, low extraversion and low social ability, result in the degree of social anxiety and place or "set point" (*p.* 757) on the continuum, but various environmental factors could move an individual up or down the continuum. These factors include interactions with parents, experiences with peers and life events. In addition, they propose that the degree of impact will vary according to whether the experience occurs at a critical point in the individual's life, how long the experience lasts, and its intensity. For example, interactions with overprotective parents who discourage social interactions over several influential years may have a considerable influence on a young anxious child's social beliefs. They propose that most environmental influences will be temporary. For example, when teenagers leave their parental home, their degree of social anxiety returns towards the set point. The model also suggests that other cultural influences will impact on the level of anxiety experienced, for example, certain cultures may tolerate social anxiety in females

more than in males, and this tolerance is likely to move an individual up the continuum.

Summary of the child models of anxiety and social anxiety

The anxiety and social anxiety models developed for children provide a useful framework to understand the development of anxiety, and some of the maintaining factors. These models do not, however, focus on the specific components that occur during a feared situation, and that might help to maintain social anxiety, such as allocation of attention, the generation of a self-impression and/or visual self-image, and safety behaviors, as described in the adult models of social phobia. This section will review the empirical literature on socially anxious children in order to examine how well the research supports factors associated with social anxiety as outlined in the child models (i.e. social skill deficits, avoidance of social situations, anticipation of unrewarding social situations, negative thoughts, low threshold for threat and role of others). In addition, it will explore the potential relevance of the adult models by examining whether mechanisms identified as being important in understanding social phobia in adults have also been identified in children.

Research in children with social anxiety

In contrast to research with adults, there has been little research carried out with socially anxious children. To assess the relevance of the child and adult models for socially anxious children, the following review considers the empirical literature in relation to the processes described in both the child and adult anxiety models. Specifically, it considers whether there is research evidence to support the existence of information processing biases, attention to threat, sense of self and observer

perspective images, anticipatory and post-event processing, social skill deficits and/or safety behaviors and the influence of other people in maintaining the disorder.

Information processing bias

Consistent with adults models of social phobia, Rapee's (2001) model predicts that anxious children have a low threat threshold, which suggests they are likely to perceive situations as threatening. Spence et al.'s (1999) model also highlights the role of negative thoughts about situations in the development of social anxiety. The majority of research conducted on children has focused on exploring associations between increased social anxiety and perceptions of danger, the potential cost of social interactions and reports of self-efficacy. There is some evidence for the information biases proposed in the models. Studies using various methodologies have shown that socially anxious children, between 8 and 17 years of age, think that distressing social events are more likely to happen specifically to them (e.g. Magnusdottir & Smari, 1999), overestimate threat in social situations (e.g. Muris, Merckelbach, & Damsma, 2000) and believe that they have low ability to cope with feared interactions (e.g. Spence et al., 1999).

For example, when socially anxious children are asked to make probability estimates about negative social interactions (such as being criticized), they predict that they are more likely to experience such events, and give higher cost ratings to negative social events in comparison to non-anxious children (Magnusdottir & Smari, 1999; Spence et al., 1999; Rheingold, Herbert, & Franklin, 2003). Spence et al., (1999), for example, found that social phobic children report proportionately more negative thoughts than non-anxious children. Similarly, socially anxious children have been found to display cognitive distortions characteristic of over-

generalizing, personalizing (Epkins, 1996; Weems, Berman, Silverman & Saavedra, 2001) and catastrophizing (Weems et al., 2001). These distortions have been found in children as young as 6 (Weems et al., 2001).

Whilst it is possible that the negative thoughts and probability estimates reported by socially anxious children reflect accurate appraisals, there is some evidence to suggest that they may be over-estimates. Following the adult literature, a number of studies have used social stories containing ambiguous information about social threat. Studies using these techniques provide clearer evidence of interpretation biases in childhood anxiety. Compared to non-anxious children, for example, socially anxious children between 8 - 13 years, were quicker to perceive threat in such situations and did so more frequently than non-anxious children (e.g. Muris, Kindt et al., 2000; Muris, Merckelbach, et al., 2000). This effect has been found for social stories regardless of whether the stories are threatening or relatively non-threatening (Muris, Luermans, Merkelbach, & Mayer, 2000). This threat perception bias is specific to anxiety disorders (social anxiety, generalized anxiety and separation anxiety) in 9 - 17 year olds, and is not found in children with externalizing disorders (Bogels & Zigterman, 2000). In addition, Muris, Merckelbach, et al. (2000) demonstrated that social anxiety remained a significant predictor of threat perception even after trait anxiety was controlled for.

Consistent with the findings in the adult literature, there is also substantial evidence that socially anxious children perceive themselves to be poorly skilled to cope in social situations. Several studies using situational appraisal questionnaires, self-efficacy questionnaires and competency scales have found that socially anxious children, aged 7 - 15, have low levels of social self-efficacy (Smári, Pétursdóttir, & Porsteinsdóttir, 2001; Spence et al., 1999; Magnúsdóttir & Smári, 1999; Muris,

2002). Some specificity has been demonstrated, as these findings remain when depression symptoms are statistically controlled for, but not when social anxiety symptoms are statistically controlled for (Magnúsdóttir & Smári, 1999). Furthermore, social self-efficacy was found to be most related to social phobia, whereas other forms of self-efficacy were more related to other types of anxiety (Muris, 2002). Whilst it is possible that some socially anxious children have skill difficulties specific to social interactions (e.g. Simonian, Beidel, Turner, Berkes, & Long, 2001), there is also some evidence that these self-efficacy ratings reflect distorted perceptions. Cartwright-Hatton, Hodges, and Porter (2003), for example, found that independent observers assessed no differences in the social skills of children with and without social anxiety, but the children with social anxiety rated their own performance more negatively than the observers.

In summary, there is evidence to suggest that socially anxious children have perception biases for social threat, believe that they have poor resources to cope with social situations and can be overly critical of their own social performance. Consistent with Rapee's (2001) and Spence et al.'s (1999) models, such biases are likely to result in avoidant behaviors (see Barrett, Rapee, Dadds, & Ryan, 1996).

Attention

Rapee (2001) proposed that anxious children have a low threat threshold, which suggests they are likely to attend to potential sources of external threat, whereas Spence et al. (1999) predict that socially anxious children will experience increased self-focused attention. The adult models of social phobia suggest attention is allocated to both internal and external sources of threat. Consistent with techniques used to measure attention in adults, experiments have employed both the modified

Stroop and dot-probe methods. For example, Kindt, Bögels, and Morren (2003) investigated the effects of the Stroop task on socially phobic children (aged 7 – 18 years old) but found no significant differences in the time taken to color name threat and non-threat words, no differences between this group compared with children with other anxiety disorders (separation and generalized anxiety), and no differences between the anxious and a non-anxious groups (Kindt, Bögels, & Morren, 2003). However, results from studies using the Stroop task are mixed and often reflect methodological differences between tasks (see Kindt, Bierman, & Brosschot, 1997). The pattern of mixed results using this paradigm has led researchers to question the validity and reliability of the Stroop as a measure of attention (de Ruiter & Brosschot, 1994).

Further research has used the dot-probe technique to explore attention to external threat. Waters, Lipp & Spence (2004), for example, showed anxious children (including children with social phobia), non-anxious children and non-anxious adults two pictures simultaneously, followed by a probe in the center of either picture. These picture pairs were either of fear-neutral or pleasant-neutral stimuli. All participants showed an attentional bias towards the threatening pictures, and no differences were found between the anxious and non-anxious groups. The investigators concluded that all individuals showed vigilance for threat. However, the authors also acknowledged that the anxious children might have shown enhanced attention towards threat if they had used threat stimuli that matched the children's anxiety concerns. For example, if they had shown the socially anxious children pictures of angry faces rather than pictures of snakes.

Despite conflicting evidence using experimental paradigms in socially anxious children, there is evidence to suggest that socially anxious children do

experience increased levels of self-focused attention during feared situations, and that attending to anxious feelings increases threat perceptions. A recent case study illustrates an 11-year-old boy's attention on his somatic anxiety and negative thoughts (e.g. "I will fail", *p.* 105) during feared dictation tasks (Ahrens-Eipper & Hoyer, 2006). Furthermore, further studies showed that including descriptions of potential anxiety symptoms, such as the word "shaking", in ambiguous stories, increased threat perceptions in both high and low anxious children (Muris, Merkelbach, Schepers, & Meesters, 2003).

In summary, there is currently insufficient evidence to demonstrate an attentional bias for external threat or an engagement in extreme self-focused attention in social situations in socially anxious children. These areas remain worthy of further investigation.

Sense of self and images from the observer perspective.

Sense of self and negative images from the observer perspective are not part of the child models, but they are an important feature of the adult models. To date there have been no empirical investigations of the observer perspective in children. However, retrospective studies of adults with social phobia do suggest that observer perspective memories stem from childhood experiences (Hackmann, et al., 1998). Furthermore, two case studies with children aged 11 and 15 highlight that socially anxious children create impressions of how they think other people see them (Ahrens-Eipper & Hoyer, 2006; Rapee & Hayman, 1996). For example, the 11-year-old boy in Ahrens-Eipper and Hoyer's (2006) case study reported a sense of himself as a "trembling child" (*p.* 105). Whether this was an image seen from the observer perspective is not clear. However, this impression is likely to have played a

maintaining role in his anxiety, because he reported gripping his pen tightly to prevent trembling.

In order for children to recall memories using the observer perspective, one might expect that certain cognitive abilities would be necessary, in particular, an ability to consider issues from a third person perspective. Developmental theory suggests that children around ten to twelve years of age are capable of this (e.g. Piaget, 1976). However, we might expect younger children to be able to understand observer perspectives, since second-order reasoning about mental states (e.g. "Jane things that John thinks ….") has been demonstrated in six and seven year olds (Perner, & Wimmer, 1985). A number of studies also suggest that social comparisons are evident in children and that this increases with age (e.g. Elkind & Bowen, 1979).

In summary, initial evidence suggests that children with social phobia generate impressions of how others see them, but it is not clear whether these impressions contain negative observer perspective images, as suggested in the adult models.

Anticipatory and post-event processing.

Spence et al.'s (1999) model of social anxiety in children incorporates the role of negative thoughts about social situations, which could be part of anticipatory processing. In contrast to the adult models, none of the child models include post-event processing. Preliminary evidence that these two processes exist in socially anxious children can be drawn from two studies. Chansky and Kendall (1997), for example, showed anxious and non-anxious children a video of children playing. Participants were told that the children were playing in an adjoining room and that they would soon be joining them. All of the anxious children had more negative

anticipatory thoughts (e.g. "Will they like me?", "They will think I am weird", *p.* 352) and higher levels of social anxiety. Social anxiety was the best predictor of these thoughts.

A related study provides some evidence that socially phobic children may recall past negative experiences when thinking about current social situations (Spence et al., 1999). Here children's first four cognitions were coded whilst they watched videos of themselves reading aloud and engaging in role-plays. Children with social phobia listed proportionately more thoughts coded as being negative than non-anxious controls. The criteria for categorizing thoughts as negative included thoughts relating to negative past performance (but see Beidel, 1991, for contradictory evidence).

In summary, initial evidence suggests that anticipatory anxiety and post-event memories, as featured in the adult models, may also be characteristic of social anxiety in children. However, studies have not fully investigated these processes in children and it is not known whether these memories and thoughts contain self-impressions, observer perspective images and whether children engage in these processes spontaneously. The role of these potential processes in maintaining anxiety also requires investigation.

Interpersonal processing:

Social performance, social skills and safety behaviors.

Spence et al.'s (1999) model focuses mostly on the proposed effects of social skill deficits, whereas the adult models place emphasis on the proposed effects of safety behaviors and self-focused attention on a person's social performance. The findings in this area with children with social anxiety are inconclusive, with several

studies concluding that socially anxious children show social skill deficits and other studies providing some evidence to suggest that the differences observed between socially anxious and non-anxious children might be a result of anxiety and safety behaviors. Studies have assessed social skills and social performance in socially anxious children using various methods including self and parental reports, behavioral observations, directly testing a child's ability to recognize and express facial emotion, and ability to understand links between behaviors, emotions and cognition.

Studies assessing whether or not children with social phobia show deficits in recognizing and expressing emotion, suggest that children with social phobia showed difficulty recognizing some facial expressions (Simonian, et al., 2001), were less effective in expressing certain facial emotions (Melfsen, Osterlow & Florin, 2000), and tended to see emotions in neutral faces (Melfsen & Florin, 2002).

One innovative study also provides preliminary evidence that socially anxious children might have difficulty comprehending thoughts, feelings and behaviors of others in social situations (Banerjee & Henderson, 2001). Here, children were asked to identify and explain faux pas from a story acted out using dolls (e.g. one character says he hates the violin to another character who loves playing the violin). In a second task, they were asked to explain deceptive self-presentational behaviors carried out to influence social evaluation (e.g. not crying after falling). Low scores on these tasks were moderately associated with high social anxiety. The study needs replication with a larger sample, with all children fully assessed for the presence of additional disorders, such as externalizing problems or autistic spectrum disorders.

One further study concluded that socially phobic children have social skills deficits. Spence et al. (1999) used various methods to assess socially phobic children's skills, including questionnaires and behavioral observations. The questionnaires they used asked parents and children to select the behavior the child would perform in given situations from a range of responses. Children also completed a social competency questionnaire, which included items such as "other kids invite me to their homes" (*p*. 215). The investigators argued that the responses to the questionnaires were indicative of skill deficits. Furthermore, the behavioral observations showed that the children with social phobia interacted with peers less frequently, for shorter duration, and initiated fewer interactions than the anxious controls. However, it is also possible that other factors could account for these findings. First, children's responses on the social competency questionnaire may reflect low levels of perceived self-efficacy, as found in other studies (e.g. Cartwright-Hatton et al., 2003). Second, the children's responses to both questionnaires and the findings from the behavioral observations may reflect the child's use of avoidant strategies and safety behaviors. Indeed, case study evidence suggests that, like adults, children use safety behaviors to compensate for their anxiety or perceived lack of social skill (see Ahrens-Eipper & Hoyer, 2006).

Further evidence suggests that not all children with social anxiety have social skills deficits. It is worth noting that the behavioral observations in Spence et al.'s (1999) study did not show any differences between the social phobic children and the non-anxious control group on other social skills measures, such as levels of assertiveness, eye-contact, or time taken to respond to their conversation partner's comments. Furthermore, studies using more subtle observation criteria such as the quality of micro skills (e.g. volume and clarity of the voice) and global impressions

(e.g. friendliness), have found little or no difference between children scoring high and low on social anxiety (Cartwright-Hatton, et al., 2003; Cartwright-Hatton, Tschernitz, & Gomersall, 2005). Moreover, independent observations of socially anxious and non-anxious children performing a speech, showed that socially anxious children appeared more nervous than the controls, but they did not show signs of deficits (Cartright-Hatton et al., 2003).

In summary, there is preliminary evidence to suggest that some children who experience social anxiety may have a fundamental deficit in social skill knowledge, as suggested in Spence et al.'s (1999) model. There is also evidence to suggest that children with social phobia do not display fundamental social skills deficits, and some differences between the behaviors of anxious and non-anxious children might be a consequence of anxiety.

Interactions with other people.

Rapee's (2001) anxiety model and Rapee and Spence's (2004) etiological model of social phobia emphasize the importance of parent-child interactions in the development and maintenance of anxiety. The association between child anxiety and parenting style is well documented and there is some evidence that parent-child interactions are involved in the maintenance and possible development of childhood anxiety (see reviews by Alden & Taylor, 2004; Hadwin, Garner, & Perez-Olivas, in press; Rapee, 2001; Velting & Albano, 2001). There is also small but substantial evidence that these processes are relevant for children with social anxiety with studies suggesting that parents of socially anxious individuals tend to be more involved and overprotective.

Retrospective self-report studies show that adult social phobics rate their parents as more controlling than agrophobics (e.g. Arrindell, Emmelkamp, Monsma, & Brilman, 1983; Bruch, Gorsky, Collins, & Berger, 1989) and than people with panic attacks (Rapee & Melville, 1997). This is also reflected in the ratings of parents' own behavior (Rapee & Melville, 1997). These findings are not limited to retrospective reports by adults. In comparison with non-anxious groups, both socially anxious children aged 9-17 and socially phobic adults perceive their parents as emphasizing other people's opinions, restricting social outings (Bruch & Heimberg, 1994; Bruch et al., 1989; Johnson, Inderbitzen-Nolan, & Schapman, 2005), and feeling ashamed of the child's performance (Johnson et al., 2005).

Whilst these reports do not demonstrate causal effect, there is evidence that child and parent's behaviors interact to help maintain and potentially develop shy and anxious behaviors. A study by Barrett, Rapee, Dadds, and Ryan (1996) showed anxious 7 - 14 year olds were even more likely to choose avoidant solutions to ambiguous social situations after discussing the situation with their parents. This pattern was not present in children who were not anxious. In a follow-up study, analysis of the discussions showed that anxious children talked more about their avoidant solutions and that their mothers reinforced these solutions by listening and agreeing with them (Dadds, Barrett, Rapee, & Ryan, 1996). In contrast, non-anxious children suggested more pro-social solutions and non-anxious mothers reinforced these solutions more.

A similar study was carried out with adolescents with social phobia (Logsdon-Conradsen et al., 2000 cited in Velting & Albano, 2001). The adolescents who chose avoidant solutions to social problems were significantly more likely to have parents with high anxiety than the adolescents who chose proactive solutions.

However, unlike Dadds et al.'s (1996) study, the adolescent's choice of solution did not alter after they had discussed the problem with their parents. This may reflect the age difference between the children participating in the two studies. First, adolescents may have had the problem for some time, may already be set in their patterns of interactions with other people and therefore less likely to be influenced by their parents. Second, adolescents place less significance on their relationship with their parents (Ellis, Rogoff, & Cromer, 1981), which suggest their decisions may be less influenced by their parents' views.

In summary, there is a small but significant body of evidence that demonstrates how other people, particularly parents, can be influential in the development and maintenance of anxiety. This is consistent with Rapee's (2001) model of childhood anxiety, and Rapee and Spence's (2004) etiological model of social phobia. How influential parents, teachers, peers and siblings are may depend on the age of the child and this factor needs to be explored in future research.

Summary of childhood research

There is some evidence to support the processes outlined in the child models, namely, a lower threat threshold for interpreting situations as threatening (as in Rapee's, 2001, model), the presence of negative cognitions and potential social skill difficulties in some children (as in Spence et al.'s, 1999, model), and the influence of others (as documented in both models). There is also preliminarily evidence for some of the processes described in the adult models in children, namely, self-focused attention, the generation of self-impressions, anticipatory processing, and the use of safety behaviors.

Comparing adult and childhood models

The adult models propose that several important factors maintain social anxiety: the use of safety behaviors; biased (reduced) processing of external information; negative pre and post-event processing and increased self-focused attention, an important component of which is the self-impression which is often a visual image seen from the observer perspective.

The child models include elements of some of these processes, such as information processing biases, self-focused attention and avoidant solutions. But they are less detailed in their description of the processes that occur to a child whilst in a social situation. Rapee's (2001) model is similar to the adult models of social phobia in that it includes the role of processing biases, high arousal and avoidance. However, as this model was not developed to describe the processes that occur specifically during social situations, it does not specify how these processes interact when a child with social anxiety enters a feared situation. As a result, Rapee's (2001) model does not provide a detailed account of particular processes, such as negative self-images and the observer perspective, that might maintain anxiety. Unlike the adult models, Rapee (2001) does not specify where attention is likely to be focused (externally and/or inwardly) or how avoidance might influence behavior during a feared situation (e.g. use of safety behaviors).

Spence et al. (1999) proposed that self-focused attention plays a role in maintaining social anxiety, the potential role of the observer perspective is not included in the model. Furthermore, there is no robust empirical evidence to demonstrate that attention in social situations is self-focused, although there is indirect support for the role of self-focused attention from case studies. Spence et al.'s (1999) model differs from the adult models by emphasizing the potential role of social skill deficits. In contrast, the adult models of social phobia place more

emphasis on how other processes, such as an internal focus of attention and safety behaviors (which may be driven by a negative observer perspective image) affect a person's social performance.

Both the etiological model of social phobia and Rapee's (2001) model of anxiety differ from the adult models of social phobia and from Spence et al.'s (1999) model of childhood social phobia by considering the systemic context within which children are operating. They highlight the importance of environmental factors, particularly the role of influential people, such as parents, and the influence of child-parent interactions is supported in the empirical literature. The influence of other people in the maintenance and potential development of social anxiety do not feature in the adult models, as they are less likely to have the same level of impact that they would on a developing child. The inclusion of these environmental factors is important in a child model of social phobia. In the following section, suggestions on how to develop such a model are proposed

Summary and suggestions for the development of a model of social phobia for children

The previous section considered the advantages and limitations of both adult and child models. This highlights the need to generate a more comprehensive model for children with social phobia, one that includes specific processes that occur when a child with social anxiety enters a feared situation. This review has argued that the adult models of social phobia might be a useful starting point for the development of a child model for several reasons. First, there is growing research to support the processes outlined in the adult model and therapeutic strategies based on the model have reduced social anxiety in adults, with a large treatment effect size (1.31) in

treatment trials (see Clark, et al., 2003). Second, if there is continuity from childhood social anxiety to social adult anxiety (as suggested by Rapee & Spence, 2004), it is also likely that similar processes, such as interpretation biases and the use of safety behaviors, will be involved in the maintenance of social phobia in both adults and children. Evidence for this overlap can be taken from the fact that children and adults with social phobia have a similar presentation and many adults report a childhood onset. Furthermore, like adults, children do not naturally habituate to their social fears despite repeated exposure to social settings such as school. Third, there is preliminary empirical support that children with social fears show negative interpretation biases, interpret social situations as dangerous, focus on negative aspects of social interactions, are sensitive to changes in their internal states and generate impressions of how other people perceive them, as outlined in the adult models of social phobia. Initial findings also suggest that anxious children experience anticipatory anxiety and prefer avoidant solutions. Case study evidence suggests they may also engage in safety behaviors.

However, this review has highlighted that the adult models are unlikely to be sufficient for children because they do not outline the role of other people in maintaining the phobia, such as such as whether other people accept a child's avoidant strategies. This important factor has been highlighted in the research with anxious children. Indeed, including the role of other people who are significant in the lives of adults with social phobia, may also further improve treatment efficacy with adults. Another difference between the current child and adult models is the inclusion of social skill deficits in the child model. The research on socially anxious children suggests that for some children a deficit in social skill knowledge may be an issue, whereas for other children, social performance may be hindered by the use of safety

behaviors. Therefore, perhaps we need more than one model of social phobia for children: one that includes social skill deficits, and one that does not. It is hypothesized that whether social skill problems feature in childhood social anxiety will depend on how old the child was when the problems started.

Drawing these factors together to form a more comprehensive model, one that includes processes that affect the individual child before, during and after the situation, and which includes the impact of other people on these processes, would have implications for treatment. Therapy based on such a model would involve the application of cognitive-behavioral therapy (CBT) to challenge and modify the beliefs and behaviors of the child, family and other significant people. It may also result in some children being taught social skills. Currently, treatment trials that have used CBT (with or without additional social skill training and with or without parental involvement) have shown that these are effective strategies. A recent meta analysis showed a moderate to large treatment effect size based on the pre and post measures of a social anxiety scale or general anxiety scale compared to a waiting list, or non-active treatment control (Compton et al., 2004). However, in these studies up to 42% of children who received CBT without parental involvement still met diagnostic criteria for social phobia post treatment. The inclusion of parents in the CBT intervention in one study (Spence, Donovan, and Brechman-Toussaint, 2000) reduced this rate to 12.5%, which further demonstrates the necessity of including systemic factors in a child model of social phobia. However, in this study independent assessors found no differences pre and post treatment on the number of peer interactions (e.g. verbalizations, deliberate physical contact, gestures, eye contact) and there were no significant differences in assertiveness (despite the inclusion of social skill training) between the treatment and control groups.

Furthermore, although parents' ratings of their child's social competence significantly improved post therapy, competency ratings also improved for the control group. This resulted in no significant differences between the treatment and the waiting list control group. These statistics suggest that there is scope for improvement, and treatment which is based on a more detailed model, such as the one outlined here, would help focus treatment strategies, and therefore further improve treatment efficacy.

Conclusions and future research

This review has drawn attention to the need to conduct further research on children with social phobia. It has argued that the adult models of social phobia are a useful starting point for generating hypotheses to be tested in children as the underlying mechanisms of the adult models are well established and appear to be relevant for younger people. Future research, however, needs to establish more clearly the precise relevance of Clark and Wells' (1995) and Rapee and Heimberg's (1997) models for socially anxious children. One way of exploring this issue is to test whether the processes detailed in the models exist within children and adolescents. This would involve investigations into the allocation of attention, which might employ the use visual tracking equipment with socially anxious children to explore whether children focus their attention on external sources of threat or whether they are predominately self-focused during social interactions. Experiments that present changes in both sources during on-line tasks under social threat conditions, could be used to investigate this process. One of the key maintaining factors in social phobia is the creation of negative self-impressions which are often images seen from the observer perspective. The presence of negative self-images in children and

adolescents requires empirical validation. Investigating the existence and impact of pre and post-event processing also need to be carried out.

Further exploration of the social skills in children with social anxiety/social phobia are required to address issues such as whether fundamental social skill deficits are common features in socially anxious children. Empirical explorations into the existence and role of safety behaviors would be a necessary part of this. Furthermore, closer investigations into the role of family members and other significant people in maintaining social phobia in children are also required.

Finally, children's disorders exist within a developmental context, which might influence the cause and maintenance of a disorder. Future studies need to examine whether differences exist between socially anxious children in different age groups in order to investigate the possibility of developmental differences. Such information is vital for the development of childhood models to guide effective treatment.

References

Abbott, M. J., & Rapee, R. M. (2004). Post-event rumination and negative self-appraisal in social phobia before and after treatment. *Journal of Abnormal Psychology, 113*(1), 136-144.

Ahrens-Eipper, S., & Hoyer, J. (2006). Applying the Clark-Wells model of social phobia to children: The case of a "dictation phobia". *Behavioral and Cognitive Psychotherapy, 34*(1), 103-106.

Alden, L. E., & Bieling, P. (1998). Interpersonal consequences of the pursuit of safety. *Behavior Research and Therapy, 36*(1), 53-64.

Alden, L. E., & Taylor, C. T. (2004). Interpersonal processes in social phobia. *Clinical Psychology Review, 24*(7), 857-882.

Alden, L. E., & Wallace, S. T. (1995). Social phobia and social appraisal in successful and unsuccessful social interactions. *Behavior Research and Therapy, 33*(5), 497-505.

Alfano, C. M., Zbikowski, S. M., Robinson, L. A., Klesges, R. C., & Scarinci, I. C. (2002). Adolescent reports of physician counseling for smoking. *Pediatrics, 109*(3), E47.

American Psychiatric Association (1980). *Diagnostic and statistical manual of mental disorders (3rd.)*. Washington, DC: Author.

American Psychiatric Association (1994). *Diagnostic and statistical manual of mental disorders (4th ed.)*. Washington, DC: Author.

Amir, N., Elias, J., Klumpp, H., & Przeworski, A. (2003). Attentional bias to threat in social phobia: facilitated processing of threat or difficulty disengaging attention from threat? *Behavior Research and Therapy, 41*(11), 1325-1335.

Amir, N., Foa, E. B., & Coles, M. E. (1998). Negative interpretation bias in social phobia. *Behaviour Research and Therapy, 36,* 945-957.

Arrindell, W. A., Emmelkamp, P. M., Monsma, A., & Brilman, E. (1983). The role of perceived parental rearing practices in the aetiology of phobic disorders: a controlled study. *British Journal of Psychiatry, 143*, 183-187.

Baddeley, A. D., & Andrade, J. (2000). Working memory and the vividness of imagery. *Journal of Experimental Psychology General, 129*(1), 126-145.

Banerjee, R., & Henderson, L. (2001). Social-cognitive factors in childhood social anxiety: A preliminary investigation. *Social Development, 10*(4), 558-572.

Barrett, P. M., Rapee, R. M., Dadds, M. M., & Ryan, S. M. (1996). Family enhancement of cognitive style in anxious and aggressive children. *Journal of Abnormal Child Psychology, 24*(2), 187-203.

Beidel, D. C. (1991). Social phobia and overanxious disorder in school-age children. *J American Academy of Child and Adolescent Psychiatry, 30*(4), 545-552.

Beidel, D. C., & Turner, S. M. (1998). Scoring the Social Phobia and Anxiety Inventory: Comments on Herbert et al (1991). *Journal of Psychopathology and Behavioral Assessment, 14*(4), 377-379.

Beidel, D. C., & Turner, S. M. (1998). What are the adult consequences of childhood shyness? *Harvard Mental Health Letters, 15*(5), 8.

Beidel, D. C., Turner, S. M., & Morris, T. L. (2000). Behavioral treatment of childhood social phobia. *Journal of Consulting and Clinical Psychology, 68*(6), 1072-1080.

Bogels, S. M., & Lamers, C. T. (2002). The causal role of self-awareness in blushing-anxious, socially-anxious and social phobics individuals. *Behavior Research and Therapy, 40*(12), 1367-1384.

Bogels, S. M., & Mansell, W. (2004). Attention processes in the maintenance and treatment of social phobia: hypervigilance, avoidance and self-focused attention. *Clinical Psychology Review, 24*(7), 827-856.

Bogels, S. M., & Zigterman, D. (2000). Dysfunctional cognitions in children with social phobia, separation anxiety disorder, and generalized anxiety disorder. *Journal of Abnormal Child Psychology, 28*(2), 205-211.

Bruch, M. A., & Heimberg, R. G. (1994). Differences in Perceptions of Parental and Personal Characteristics between Generalized and Nongeneralized Social Phobics. *Journal of Anxiety Disorders, 8*(2), 155-168.

Bruch, M. A., Gorsky, J. M., Collins, T. M., & Berger, P. A. (1989). Shyness and Sociability Reexamined - a Multicomponent Analysis. *Journal of Personality and Social Psychology, 57*(5), 904-915.

Calvo, M. G., & Eysenck, M. W. (1996). Phonological working memory and reading in test anxiety. *Memory, 4*(3), 289-305.

Campbell, M. A., & Rapee, R. M. (1994). The nature of feared outcome representations in children. *Journal of Abnormal Child Psychology, 22*(1), 99-111.

Cartwright-Hatton, S., Hodges, L., & Porter, J. (2003). Social anxiety in childhood: the relationship with self and observer rated social skills. *J Child Psychol Psychiatry, 44*(5), 737-742.

Cartwright-Hatton, S., Tschernitz, N., & Gomersall, H. (2005). Social anxiety in children: social skills deficit, or cognitive distortion? *Behavior Research and Therapy, 43*(1), 131-141.

Chansky, T. E., & Kendall, P. C. (1997). Social expectancies and self-perceptions in anxiety-disordered children. *J Anxiety Disord, 11*(4), 347-363.

Chen, Y. P., Ehlers, A., Clark, D. M., & Mansell, W. (2002). Patients with generalized social phobia direct their attention away from faces. *Behavior Research and Therapy, 40*(6), 677-687.

Clark, D. M. (1999). Anxiety disorders: why they persist and how to treat them. *Behavior Research and Therapy, 37 Suppl 1*, S5-27.

Clark, D. M. (2001). A cognitive perspective on social phobia. In W. R. Crozier & L. E. Alden (Eds), *International handbook of social anxiety: Concepts, research and interventions relating to the self and shyness.* (pp. 405-430). Chichester: John Wiley & Sons.

Clark, D. M. (2004). Developing new treatments: on the interplay between theories, experimental science and clinical innovation. *Behavior Research and Therapy, 42*(9), 1089-1104.

Clark, D. M., Ehlers, A., McManus, F., Hackmann, A., Fennell, M., Campbell, H., et al., (2003) Cognitive Therapy Versus Fluoxetine in Generalized Social Phobia: A Randomized Placebo-Controlled Trial. *Journal of Consulting and Clinical Psychology, 71(6),* 1058-1067.

Clark, D., & Wells, A. (1995). A cognitive model of social phobia. In R. Heimberg, M. Liebowitz, D. Hope & F. Schneier (Eds.), *Social phobia: Diagnosis, assessment, and treatment* (pp. 69-93). New York: Guilford Press.

Coles, M. E., Turk, C. L., Heimberg, R. G., & Fresco, D. M. (2001). Effects of varying levels of anxiety within social situations: relationship to memory perspective and attributions in social phobia. *Behavior Research and Therapy, 39*(6), 651-665.

Compton, S. N., March, J. S., Brent, D., Albano, A. M., Weersing, R., & Curry, J. (2004). Cognitive-behavioral psychotherapy for anxiety and depressive disorders in children and adolescents: an evidence-based medicine review. *Journal of the American Academy of Child and Adolescent Psychiatry, 43*(8), 930-959.

Dadds, M. R., Barrett, P. M., Rapee, R. M., & Ryan, S. (1996). Family process and child anxiety and aggression: an observational analysis. *Journal of Abnormal Child Psychology, 24*(6), 715-734.

de Ruiter, C., & Brosschot, J. F. (1994). The emotional Stroop interference effect in anxiety: attentional bias or cognitive avoidance? *Behavior Research and Therapy, 32*(3), 315-319.

DePaulo, B. M., Epstein, J. A., & LeMay, C. S. (1990). Responses of the socially anxious to the prospect of interpersonal evaluation. *Journal of Personality, 58*(4), 623-640.

Edwards, S. L., Rapee, R. M., & Franklin, J. (2003). Postevent rumination and recall bias for a social performance event in high and low socially anxious.

Elkind, D & Bowen, R (1979). Imaginary audience behavior in children and adolescents. *Developmental Psychology, 15,* 38-44.

Ellis, S., Rogoff, B., & Cromer, C. C. (1981). Age Segregation in Childrens Social Interactions. *Developmental Psychology, 17*(4), 399-407.

Epkins, C. C. (1996). Parent ratings of children's depression, anxiety, and aggression: a cross-sample analysis of agreement and differences with child and teacher ratings. *Journal of Clinical Psychology, 52*(6), 599-608.

Esteves, F. (1999). Attentional bias to emotional facial expressions. *European Review of Applied Psychology-Revue Europeenne De Psychologie Appliquee, 49*(2), 91-96.

Eysenck, M., & Calvo, M. (1992). Anxiety and performance: The processing efficiency theory. *Cognition & Emotion, 6(6),* 409-434.

Fenigstein, A., Scheier, M. F., & Buss, A. H. (1975). Public and Private Self-Consciousness - Assessment and Theory. *Journal of Consulting and Clinical Psychology, 43*(4), 522-527.

Field, A. P., & Morgan, J. (2004). Post-event processing and the retrieval of autobiographical memories in socially anxious individuals. *J Anxiety Disord, 18*(5), 647-663.

Foa, E. B., Franklin, M. E., Perry, K. J., & Herbert, J. D. (1996). Cognitive biases in generalized social phobia. *Journal of Abnormal Psychology, 105*(3), 433-439.

Garner, M., Mogg, K., & Bradley, B. P. (2006). Fear-relevant selective associations and social anxiety: absence of a positive bias. *Behavior Research and Therapy, 44*(2), 201-217.

Gilboa-Schechtman, E., Foa, E. B., & Amir, N. (1999). Attentional biases for facial expressions in social phobia: The face-in-the-crowd paradigm. *Cognition & Emotion, 13*(3), 305-318.

Glass, C. R., & Arnkoff, D. B. (1994). Validity issues in self-statement measures of social phobia and social anxiety. *Behavior Research and Therapy, 32*(2), 255-267.

Glass, C., & Furlong, M. (1990). Cognitive assessment of social anxiety: Affective and behavioral correlates. *Cognitive Therapy and Research, 14(4),* 365-384.

Hackmann, A., Surawy, C., & Clark, D. M. (1998). Seeing yourself through others' eyes: A study of spontaneously occurring images in social phobia. *Behavioral and Cognitive Psychotherapy, 26*(1), 3-12

Hackmann, A., Surawy, C., & Clark, D. M. (1998). Seeing yourself through others' eyes: A study of spontaneously occurring images in social phobia.

Behavioural and Cognitive Psychotherapy, 26, 3-12.

Hadwin, J. A., Garner, M., & Perez-Olivas, G. (in press). The development of information processing biases in childhood anxiety: A review and exploration of its origins in parenting. *Clinical Psychology Review.*

Harve, A. G., Clark, D. M., Ehlers, A., & Rapee, R. M. (2000). Social anxiety and self-impression: cognitive preparation enhances the beneficial effects of video feedback following a stressful social task. *Behavior Research and Therapy, 38*(12), 1183-1192.

Harvey, A., Clark, D. M., Ehlers, A., & Rapee, R. M. (2000). Social anxiety and self-impression: Cognitive preparation enhances the beneficial effects of video feedback following a stressful social task. *Behaviour Research and Therapy, 38(12),* 1183-1192.

Heimberg, R. G., & Juster, H. R. (1995). Cognitive-behavioral treatments: Literature review. In R. G. Heimberg, M. R. Liebowitz, D. A. Hope & F. R. Schneier (Eds.), *Social phobia: Diagnosis, assessment, and treatment* (pp. 261-309). New York: Guilford Press.

Hinrichsen, H., & Clark, D. M. (2003). Anticipatory processing in social anxiety: two pilot studies. *Journal of Behavior Therapy and Experimental Psychiatry, 34*(3-4), 205-218.

Hirsch, C. R., & Clark, D. M. (2004). Information-processing bias in social phobia. *Clinical Psychology Review, 24*(7), 799-825.

Hirsch, C. R., & Mathews, A. (2000). Impaired positive inferential bias in social phobia. *Journal of Abnormal Psychology, 109*(4), 705-712.

Hirsch, C. R., Clark, D. M., Mathews, A., & Williams, R. (2003). Self-images play a causal role in social phobia. *Behavior Research and Therapy, 41*(8), 909-921.

Hirsch, C. R., Mathews, A., Clark, D. M., Williams, R., & Morrison, J. (2003). Negative self-imagery blocks inferences. *Behavior Research and Therapy, 41*(12), 1383-1396.

Hirsch, C. R., Meynen, T., & Clark, D. M. (2004). Negative self-imagery in social anxiety contaminates social interactions. *Memory, 12*(4), 496-506.

Hope, D. A., Heimberg, R. G., & Klein, J. F. (1990). Social anxiety and the recall of interpersonal information. *Journal of Cognitive Psychotherapy, 4*(2), 185-195.

Johnson, H. S., Inderbitzen-Nolan, H. M., & Schapman, A. M. (2005). A comparison between socially anxious and depressive symptomatology in youth: a focus on perceived family environment. *Journal of Anxiety Disorders, 19*(4), 423-442.

Kindt, M., Bierman, D., & Brosschot, J. F. (1997). Cognitive bias in spider fear and control children: assessment of emotional interference by a card format and a single-trial format of the Stroop task. *Journal of Experimental Child Psychology, 66*(2), 163-179.

Kindt, M., Bogels, S., & Morren, M. (2003). Processing bias in children with separation anxiety disorder, social phobia and generalised anxiety disorder. *Behaviour Change, 20*(3), 143-150.

Kocovski, N. L., Endler, N. S., Rector, N. A., & Flett, G. L. (2005). Ruminative coping and post-event processing in social anxiety. *Behaviour Research and Therapy, 43*(8), 971-984.

La Greca, A. M. (1999). The Social Anxiety Scales for Children and Adolescents. *Behavior Therapist, 22*(7), 133-136.

Last, C. G., & Strauss, C. C. (1990). School refusal in anxiety-disordered children and adolescents. *J American Academy of Child and Adolescent Psychiatry, 29*(1), 31-35.

Last, C. G., Hersen, M., Kazdin, A., Orvaschel, H., & Perrin, S. (1991). Anxiety disorders in children and their families. *Arch Gen Psychiatry, 48*(10), 928-934.

Logsdon-Conradsen, S., Abano, A. M., Hammond, A., Barlow, D., Heimberg, R., & DiBartolo, P. (2000). *The influence of parental anxious behavior in adolescents with social phobia.* Manuscript under review. Cited in Velting, O., & Albano, A. M. (2001). Current trends in the understanding and treatment of social phobia in youth. *Journal of Child Psychology and Psychiatry, 42*(1), 27-140.

Lucock, M. P., & Salkovskis, P. M. (1988). Cognitive factors in social anxiety and its treatment. *Behavior Research and Therapy, 26*(4), 297-302.

MacLeod, C., Mathews, A., & Tata, P. (1986). Attentional Bias in Emotional Disorders. *Journal of Abnormal Psychology, 95,* 15-20.

Magnusdottir, I., & Smari, J. (1999). Social anxiety in adolescents and appraisal of negative events: Specific or generality of bias? *Behavioral and Cognitive Psychotherapy, 27*(3), 223-230.

Maidenberg, E., Chen, E., Craske, M., Bohn, P., & Bystritsky, A. (1996). Specificity of attentional bias in panic disorder and social phobia. *Journal of Anxiety Disorders, 10*(6), 529-541.

Mansell, W., & Clark, D. M. (1999). How do I appear to others? Social anxiety and processing of the observable self. *Behaviour Research and Therapy, 37*(5), 419-434.

Mansell, W., Clark, D. M., & Ehlers, A. (2003). Internal versus external attention in social anxiety: an investigation using a novel paradigm. *Behaviour Research and Therapy, 41*(5), 555-572.

Mansell, W., Clark, D. M., Ehlers, A., & Chen, Y. P. (1999). Social anxiety and attention away from emotional faces. *Cognition & Emotion, 13*(6), 673-690.

McManus, F., Clark, D. M., & Hackmann, A. (2000). Specificity of cognitive biases in social phobia and their role in recovery. *Behavioral and Cognitive Psychotherapy, 28*(3), 201-209.

Meleshko, K. G. A., & Alden, L. E. (1993). Anxiety and Self-Disclosure - toward a Motivational Model. *Journal of Personality and Social Psychology, 64*(6), 1000-1009.

Melfsen, S., & Florin, I. (2002). Do socially anxious children show deficits in classifying facial expressions of emotions? *Journal of Nonverbal Behavior, 26*(2), 109-126.

Melfsen, S., Osterlow, J., & Florin, I. (2000). Deliberate emotional expressions of socially anxious children and their mothers. *Journal of Anxiety Disorders, 14*(3), 249-261.

Mellings, T. M. B., & Alden, L. E. (2000). Cognitive processes in social anxiety: the effects of self-focus, rumination and anticipatory processing. *Behaviour Research and Therapy, 38*(3), 243-257.

Mogg, K., Bradley, B. P., de Bono, J., & Painter, M. (1997). Time course of attentional bias for threat information in non-clinical anxiety. *Behaviour Research and Therapy, 35(4),* 297-303.

Mogg, K., Philippot, P., & Bradley, B. P. (2004). Selective Attention to Angry Faces in Clinical Social Phobia. *Journal of Abnormal Psychology, 113(1),* 160-165.

Morgan, H., & Raffle, C. (1999). Does reducing behaviors improve treatment response in patients with social phobia? *Australian and New Zealand Journal of Psychiatry, 33*(4), 503-510.

Muris, P. (2002). Relationships between self-efficacy and symptoms of anxiety disorders and depression in a normal adolescent sample. *Personality and Individual Differences, 32*(2), 337-348.

Muris, P., Kindt, M., Bogels, S., Merckelbach, H., Gadet, B., & Moulaert, V. (2000). Anxiety and threat perception abnormalities in normal children. *Journal of Psychopathology and Behavioral Assessment, 22*(2), 183-199.

Muris, P., Luermans, J., Merckelbach, H., & Mayer, B. (2000). "Danger is lurking everywhere". The relation between anxiety and threat perception abnormalities in normal children. *Journal of Behavior Therapy and Experimental Psychiatry, 31*(2), 123-136.

Muris, P., Merckelbach, H., & Damsma, E. (2000). Threat perception bias in nonreferred, socially anxious children. *Journal of Clinical Child Psychology, 29*(3), 348-359.

Muris, P., Merckelbach, H., Schepers, S., & Meesters, C. (2003). Anxiety, threat perception abnormalities, and emotional reasoning in nonclinical dutch children. *Journal of Clinical Child and Adolescent Psychology, 32*(3), 453-459.

Musa, C., Lepine, J. P., Clark, D. M., Mansell, W., & Ehlers, A. (2003). Selective attention in social phobia and the moderating effect of a concurrent depressive disorder. *Behaviour Research and Therapy, 41*(9), 1043-1054.

Ollendick, T. H., & Ingman, K. A. (2001). Social phobia. In H. Orvaschel, J. Faust, & M. Hersen (Eds). (2001). *Handbook of Conceptualization and Treatment of*

Child Psychopathology. (pp. 191-210). Amsterdam, Netherlands: Pergamon/Elsevier Science Inc.

Ollendick, T. H., Grills, A. E., & King, N. J. (2001). Applying developmental theory to the assessment and treatment of childhood disorders: Does it make a difference? *Clinical Psychology & Psychotherapy, 8*(5), 304-314.

Ollendick, T. H., King, N. J., & Frary, R. B. (1989). Fears in Children and Adolescents - Reliability and Generalizability across Gender, Age and Nationality. *Behaviour Research and Therapy, 27*(1), 19-26.

Ost, L. G. (1985). Ways of Acquiring Phobias and Outcome of Behavioral Treatments. *Behaviour Research and Therapy, 23*(6), 683-689.

Piaget, J. (1976). *Judgement and Reasoning in the Child.* New York: Harcourt Brace Jovanovich (first published 1928).

Pernilla, J., Lundqvist, D., Karlsson, A., & Ohman, A. (2005). Looking for foes and friends: Perceptual and emotional factors when finding a face in the crowd. *Emotion, 5*(4), 379-395.

Perner, J. & Wimmer, H (1985). John thinks that mary thinks that - attribution of 2nd-order beliefs by 5-year-old to 10-year-old children. *Journal of Experimental Child Psychology*, *39*, 437-471.

Perowne, S., & Mansell, W. (2002). Social anxiety, self-focused attention, and the discrimination of negative, neutral and positive audience members by their non-vernal behaviours. *Behavioural and Cognitive Psychotherapy, 30*, 11-23.

Pineles, S. L., & Mineka, S. (2005). Attentional biases to internal and external sources of potential threat in social anxiety. *Journal of Abnormal Psychology, 114*(2), 314-318.

Pishyar, R., Harris, L., & Menzies, R. G. (2004). Attentional bias for words and faces in social anxiety. *Anxiety, Stress & Coping: An International Journal, 17(1),* 23-36.

Rachman, S., Gruter-Andrew, J., & Shafran, R. (2000). Post-event processing in social anxiety. *Behaviour Research and Therapy, 38*(6), 611-617.

Rapee, R. M. (1995). Psychological-Factors Influencing the Affective Response to Biological Challenge Procedures in Panic Disorder. *Journal of Anxiety Disorders, 9*(1), 59-74.

Rapee, R. M. (1997). Potential role of childrearing practices in the development of anxiety and depression. *Clinical Psychology Review, 17*(1), 47-67.

Rapee, R. M. (2001). The development of generalized anxiety disorder. In M.W. Vasey & M. R. Dadds (Eds), *The developmental psychopathology of anxiety.* (pp. 481-504). New York: Oxford University Press.

Rapee, R. M., & Hayman, K. (1996). The effects of video feedback on the self-evaluation of performance in socially anxious subjects. *Behaviour Research and Therapy, 34*(4), 315-322.

Rapee, R. M., & Heimberg, R. G. (1997). A cognitive-behavioral model of anxiety in social phobia. *Behaviour Research and Therapy, 35*(8), 741-756.

Rapee, R. M., & Lim, L. (1992). Discrepancy between Self and Observer Ratings of Performance in Social Phobics. *Journal of Abnormal Psychology, 101*(4), 728-731.

Rapee, R. M., & Melville, L. F. (1997). Recall of family factors in social phobia and panic disorder: comparison of mother and offspring reports. *Depression and Anxiety, 5*(1), 7-11.

Rapee, R., & Spence, S. (2004). The etiology of social phobia: Empirical evidence and an initial model. *Clinical Psychology Review, 24(7),* 737-767.

Rheingold, A. A., Herbert, J. D., & Franklin, M. E. (2003). Cognitive bias in adolescents with social anxiety disorder. *Cognitive Therapy and Research, 27*(6), 639-655.

Schneier, F. R., Johnson, J., Hornig, C. D., Liebowitz, M. R., & Weissman, M. M. (1992). Social Phobia - Comorbidity and Morbidity in an Epidemiologic Sample. *Archives of General Psychiatry, 49*(4), 282-288.

Segrin, C. (2001). Social skills and negative life events: Testing the deficit stress generation hypothesis. *Current Psychology, 20*(1), 19-35.

Simonian, S. J., Beidel, D. C., Turner, S. M., Berkes, J. L., & Long, J. H. (2001). Recognition of facial affect by children and adolescents diagnosed with social phobia. *Child Psychiatry & Human Development, 32*(2), 137-145.

Smari, J., Petursdottir, G., & Porsteinsdottir, V. (2001). Social anxiety and depression in adolescents in relation to perceived competence and situational appraisal. *Journal of Adolescence, 24*(2), 199-207.

Spector, I., Pecknold, J. C., & Libman, E. (2003). Selective attentional bias related to the noticeability aspect of anxiety symptoms in generalized social phobia. *Journal of anxiety disorders, 17*(5), 517-531.

Spence, S. Donovan, C. & Brechman-Toussaint, M. (1999). Social skills, social outcomes, and cognitive features of childhood social phobia. *Journal of Abnormal Psychology, 108(2),* 211-221.

Spence, S. H., Donovan, C., & Brechman-Toussaint, M. (2000). The treatment of childhood social phobia: The effectiveness of a social skills training-based,

cognitive-behavioural intervention, with and without parental involvement. *Journal of Child Psychology and Psychiatry, 41*(6), 713-726.

Spurr, J. M., & Stopa, L. (2002). Self-focused attention in social phobia and social anxiety. *Clinical Psychology Review, 22*(7), 947-975.

Stopa, L., & Clark, D. M. (1993). Cognitive-Processes in Social Phobia. *Behaviour Research and Therapy, 31*(3), 255-267.

Stopa, L., & Clark, D. M. (2000). Social phobia and interpretation of social events. *Behaviour Research and Therapy, 38*(3), 273-283.

Strauss, C. C., & Last, C. G. (1993). Social and simple phobias in children. *Journal of Anxiety Disorders, 7,* 141-152.

Vassilopoulos, S. (2005). Social Anxiety and the Vigilance-Avoidance Pattern of Attentional Processing. *Behavioural and Cognitive Psychotherapy, 33(1),* 13-24.

Veljaca, K. A., & Rapee, R. M. (1998). Detection of negative and positive audience behaviours by socially anxious subjects. *Behaviour Research and Therapy, 36*(3), 311-321.

Velting, O. N., & Albano, A. M. (2001). Current trends in the understanding and treatment of social phobia in youth. *Journal of Child Psychology and Psychiatry, 42*(1), 127-140.

Verhulst, F. C., vanderEnde, J., Ferdinand, R. F., & Kasius, M. C. (1997). The prevalence of DSM-III-R diagnoses in a national sample of Dutch adolescents. *Archives of General Psychiatry, 54*(4), 329-336.

Waters, A., Lipp, O., & Spence, S. (2004). Attentional bias toward fear-related stimuli: An investigation with nonselected children and adults and children

with anxiety disorders. *Journal of Experimental Child Psychology, 89* (4), 320-337.

Weems, C. F., Berman, S. L., Silverman, W. K., & Saavedra, L. M. (2001). Cognitive errors in youth with anxiety disorders: The linkages between negative cognitive errors and anxious symptoms. *Cognitive Therapy and Research, 25*(5), 559-575.

Wells, A., & Matthews, G. (1994). Self-Consciousness and Cognitive Failures as Predictors of Coping in Stressful Episodes. *Cognition & Emotion, 8*(3), 279-295.

Wells, A., & Papageorgiou, C. (1998). Social phobia: Effects of external attention on anxiety, negative beliefs, and perspective taking. *Behavior Therapy, 29*(3), 357-370.

Wells, A., & Papageorgiou, C. (2001). Brief cognitive therapy for social phobia: a case series. *Behaviour Research and Therapy, 39*(6), 713-720.

Wells, A., Clark, D. M., Salkovskis, P., Ludgate, J., Hackmann, A., & Gelder, M. (1995). Social Phobia - the Role of in-Situation Safety Behaviors in Maintaining Anxiety and Negative Beliefs. *Behavior Therapy, 26*(1), 153-161.

Woody, S. R. (1996). Effects of focus of attention on anxiety levels and social performance of individuals with social phobia. *Journal of Abnormal Psychology, 105*(1), 61-69.

Woody, S. R., & Rodriguez, B. F. (2000). Self-focused attention and social anxiety in social phobics and normal controls. *Cognitive Therapy and Research, 24*(4), 473-488.

Empirical Paper*

Observer Perspective Memories in Children:

Are they related to social anxiety and social memories?

Running head: Observer Perspective, Social Anxiety and Children

Jacqueline R. Boyle

Correspondence regarding this article should be addressed to

Jacqueline Boyle, Doctoral Program in Clinical Psychology, Shackleton Building (44), University of Southampton, Highfield, Southampton, SO17 1BJ

* Applying American Psychological Association (2001) guidelines, prepared for submission to Journal of Abnormal Child Psychology (see Appendix B for Guide for Authors)

Abstract

Cognitive models of social phobia have improved our understanding and treatment of this condition in adults. Within these models, Clark and Wells (1995), and Rapee and Heimberg (1997) propose that negative self-images, often visual images seen and recalled from the perspective of an observer (OP), are an important maintaining factor. The aim of this study was to explore the relevance of the OP to children. Fifty-eight children (aged 7 – 14 years) recalled memories of social and physical situations and were asked to label the perspective they used (OP or field perspective, recalling seeing the world through his/her own eyes). Social anxiety, memory distress and memory age were also measured. Children did recall OP memories. OP was not related to child's age, social anxiety or social memories. Interestingly, OP was related to older social memories, but not to memory distress. Possible reasons for the findings and the potential implications are discussed.

Key words: Children, Social, Anxiety, Observer, Perspective

Introduction

Social anxiety is one of the most common anxiety disorders in childhood (Verhulst, van der Ende, Ferdinand, & Kasius, 1997). Characterized by fear of behaving in a humiliating way that might result in negative evaluation and rejection, children with social anxiety avoid feared social situations or endure them with extreme distress (DSM-IV; APA, 1994). The disorder can have significant consequences for children, interfering with social and academic development (APA, 1994). It has been strongly related to school refusal (Last & Strauss, 1990) and has a high rate of comorbidity with other disorders (Last, Hersen, Kazdin, Orvaschel, & Perrin, 1991).

Some studies have found that children's concerns around social evaluation increase with developmental age as children approach adolescence (Ollendick, King, & Frary, 1989). Other studies have found a relatively constant fear of evaluation between 6 and 16 years (Campbell & Rapee, 1994). The mean age of onset for social phobia is reported to be around 12 years (Strauss & Last, 1993). However, Rapee (1995) argues that this mean figure is misleading as it detracts from the high proportion of younger children with social anxiety. Indeed, several studies have found that young children (around 6 years) report higher levels of social anxiety and fear of negative evaluation compared with those in middle-childhood, around 12 years (La Greca, 1999). Some studies cite a bimodal age of onset, before 5 years and in early adolescence (Schneier, Johnson, Hornig, Liebowitz, & Weissman, 1992).

There has been relatively little research into social anxiety in children. There is currently no widely used and accepted model of social phobia for young people that describes the processes that occur when a young person enters a feared social situation. Such a model would help to guide assessment and intervention. In contrast,

recent cognitive models of social phobia for adults (Clark & Wells, 1995; Rapee & Heimberg, 1997) are now widely accepted and used. These models propose that one of the key factors maintaining social phobia, is the information processing biases that occur when individuals enter and think about a social anxiety provoking situation. In such situations, individuals direct a significant proportion of their attention to scrutinizing their own behavior and levels of anxiety. As part of this self-focused attention, the models propose that individuals generate and remember an impression of how they think other people view them. Specifically, they propose that this impression is often a visual image seen from an observer or audience perspective (in contrast to the field perspective, where the individual recalls seeing the world through his/her own eyes).

The models propose that negative observer perspective images can have a powerful impact on an individual. For individuals with social phobia, these images are often negative and distorted, containing exaggerated features of an individual's fears (Clark, 2001). For example, a person who fears that other people will think s/he is embarrassed, may have an observer perspective image of him/herself with a bright red face. During the situation, such self-focused attention may maintain anxiety by preventing individuals from processing information from others that might contradict their beliefs (Woody, 1996). This is possibly one reason why individuals with social phobia do not naturally habituate to their social fears, despite their repeated exposure to social situations (Clark, 2001). The image also maintains social anxiety because it reinforces individuals' negative beliefs about themselves. The importance of this self-generated impression does not feature in the childhood models of anxiety, which tend to be quite broad in their description of the processes that occur during anxious situations (see Rapee, 2001, for example).

Empirical studies have provided some evidence that observer perspective images are experienced by adults with social anxiety. These studies usually ask participants who are high and low on social anxiety to recall recent anxiety provoking social situations and non-social situations, and then ask participants to rate whether their memories were from an observer or field perspective (e.g. Hackmann, Surawy, & Clark, 1998; Wells, Clark & Ahmad, 1998; Wells & Papageorgiou, 1999; Coles, Turk, Heimberg, & Fresco, 2001). To ensure that individuals high and low on social anxiety are recalling comparable memories, some studies have required participants to engage in a social anxiety provoking situation (such as giving a speech) and then enquired about their memory for this event (e.g. Coles, Turk, Heimberg, & Fresco, 2001).

Further research has found that the more distressing the social memory is for the person with social anxiety, the more the observer perspective is likely to occur (Coles et al., 2001). In addition, it has highlighted that the use of the observer perspective increases with time (Coles, Turk, & Heimberg, 2002). In contrast, those with a low fear of social-evaluation tend to use the field perspective more often when recalling more distressing (Coles et al., 2001) and older social memories (Coles et al., 2002).

Recent evidence suggests that negative observer perspective images may play a causal role in maintaining social anxiety. For example, when individuals with high social anxiety are instructed to use an observer perspective whilst in an experimental social situation (e.g. Spurr & Stopa, 2002; Wells & Papageorgiou, 1998) or when they are asked to maintain their usual negative image during a social task (e.g. Hirsch, Clark, Mathews, & Williams, 2003; Hirsch, Maynen, & Clark, 2004), they report higher levels of anxiety, more negative thoughts and performed less well.

There is some indication that observer perspective memories may stem from childhood. Interviews with patients with social phobia demonstrated that recurrent observer perspective images were linked to childhood experiences that occurred around the onset of the disorder (Hackmann, Clark, & McManus, 2000). These early experiences may have led to the development of negative self-images (Hackmann et al., 2000). Furthermore, Rapee and Heimberg (1997) propose that observer perspective images incorporate past experiences. An early study in social psychology, for example, found that adults who recalled memories prior to the age of six were more likely to recall observer perspective memories (Nigro & Neisser, 1983). However, there have not been any studies investigating observer perspective images or memories in children and young adolescents.

The present study aimed to see if children and young adolescents (aged between 7 - 14) recall memories from both observer and field perspectives.

Subsidiary aims were to see whether there were differences in the number of observer compared to field perspective memories recalled by children in the different age groups (as a preliminary assessment for the possibility of developmental differences), and whether use of the observer perspective differed according to type of memory and level of social anxiety. Children were asked to label whether their memories for situations were predominantly from the observer or field perspective. As social anxiety appears to exist throughout childhood, children from different age groups (7 – 8 years, 10 – 11 years, and 13 – 14 years) were asked to participate in the study. Samples of children from the three age groups were used because studies on social development suggest that the social needs and concerns of children change at different stages of development.

Following research with adults, children were asked to recall anxiety provoking social and physical (i.e. non-social) memories and then asked whether their memory was seen from an observer or a field perspective. To help elicit these memories, children were asked to recall a number of everyday anxiety provoking situations that most children had experienced. These situations were identified on the basis of existing literature on children's and adolescents' memories of feared situations (Beidel, Turner, & Morris, 1995; Campell & Rapee, 1994; Muris, Kindt, Bögels, Merckelbach, Gadet, & Moularert, 2000). Social situations included, for example, being called a nasty name by someone at school, and speaking/reading in front of the class. Physical memories included, for example, waking up from a nightmare, and watching a frightening movie/program on television.

In order to see if levels of social anxiety and distress influenced use of the observer perspective when recalling memories, these variable were also examined. Children's scores on the Fear of Negative Evaluation subscale (La Greca & Lopez, 1998) were also included in the analyses because this construct has been used previously to differentiate high and low socially anxious adults (e.g. Stopa & Clark, 1993). In order to address issues of specificity, the study measured depression and trait anxiety. Depression was also measured in this study because of its association with a memory bias for negative information about the self (Blaney, 1986). Finally, as more distressing social memories and older social memories are more likely to viewed from the observer perspective (e.g. Coles et al., 2002), memory age and ratings of memory distress were also examined.

Method

Design

The study used a mixed measures design to investigate differences in the number of observer and field perspective memories recalled. It explored the use of the observer perspective with type of memory (physical or social) and child's age. The independent variables were type of memory (physical or social) and child's age. The dependent variable was the perspective recalled (observer or field). Then, a correlational design explored whether the observer perspective was related to the level of social anxiety symptoms. Correlational designs were used in further analyses to explore the relationship between the observer perspective and other memory characteristics (i.e. age of memory and level of memory distress).

Participants

Participants were 58 school children aged between 7 and 14 years. Nineteen of them (13 female, 6 male) were between 7 - 8 years old ($M = 7.25$ years, $SD = 0.43$), 19 (10 female, 9 male) were between 10 - 11 years ($M = 10.16$ years, $SD = 0.37$), and 20 (14 female, 6 male) were between 13 - 14 years ($M = 13.15$ years, $SD = 0.36$). The children were drawn from an inner city primary and secondary school. The parents and guardians of all children in year groups 3, 6 and 9 were sent letters outlining the study together with consent forms. Only those with written parental permission were included. Consent was also obtained from each child on the day of testing.

Self-Report Measures

Social Anxiety Scale for Children-Revised (SASC-R) and Social Anxiety Scale for Adolescents (SAS-A) (La Greca & Lopez, 1998).

The SASC-R was completed by the 7 - 11 year olds and the SAS-A was completed by the 13 – 14 year olds. The scales are almost identical, but La Greca and Lopez (1998) modified the language on the SAS-A for an older population. The factor structure of the SAS-A has been shown to mirror that of the SASC-R (e.g. La Greca & Lopez, 1998).

These 22-item questionnaires consist of three subscales: the Social Avoidance and Distress Specific to New Situations subscale (SAD-New: 6 items), the Generalized Social Avoidance and Distress subscale (SAD-General: 4 items), and the Fear of Negative Evaluation from peers subscale (FNE: 8 items). There are a further four filler items. Items are measured using 5-point Likert scales (1= "definitely not true" and 5 = "definitely true").

The measures have satisfactory to good test-retest reliability. For children aged 9 - 12, test re-test reliabilities were .63 for FNE, .61 for SAD-NEW, and .51 for SAD-General (La Greca, Silverman, & Wasserstein, 1998). For adolescents aged 13 - 15, test re-test reliabilities were .78, .72 and .54 respectively (Vernberg, Abwender, Ewell, & Beery, 1992). Internal consistencies on the SASC-R were .86, .78 and .69 respectively (La Greca & Stone, 1993). Internal consistencies on the SAS-A were .91, .83 and .76 respectively (La Greca, Dandes, Wick, Shaw, & Stone, 1988). Concurrent validity has been demonstrated with children with social-anxiety scoring significantly higher on the SASC-R and SAS-A than children without social anxiety. The SAS-A has discriminated between adolescents with and without social phobia (see Ginsburg, LaGreca, & Silverman, 1998).

Revised Children's Manifest Anxiety Scale (RCMAS, Reynolds & Richmond, 1978).

The RCMAS is a 28-item dichotomous (yes/no) self-report measure developed to measure the extent and nature of anxiety in children aged 6 - 19. The scale contains three subscales measuring physiological anxiety (10 items), worry or over-sensitivity (11 items), and social concern and concentration (7 items). The scaled scores on the social concern and concentration subscale were included in the analyses because children scoring high on this scale may feel that they are not as good, effective or capable as other people and that they are unable to live up to other people's expectations of them. Reliability and validity have been demonstrated (see Reynolds, 1980, 1982; Reynolds & Richmond, 1978) and the RCMAS is frequently used for research and clinical purposes.

Children's Depression Inventory – short form (CDI-S, Kovacs, 1992).

The CDI-S is a 10-item self-report questionnaire, developed to measure depressive symptoms in 7 - 17 year-olds. For each question, the child chooses one from three sentences that best represents how s/he recently felt. Reliability and validity have been demonstrated (see Kocacs, 1992) and the scale is frequently used for research and clinical purposes.

Distress Rating Scale, Adapted from the Rating Scale of Mental Effort (RSME) by Zijlstra (1993).

In order to ascertain participant's levels of distress when recalling the memories, participant's marked on a vertical line from 0 - 15 cm how distressing

their memory was for each specific situation. Nine points are marked on the scale from "I feel better than ok" (at 0.2cm) to "I am the most upset ever" (at 14.5 cm). Faces illustrate increasing levels of distress at each point. Distress reflects the distance in mm from 0 to the mark made.

Materials

Teaching materials.

To teach the children about the field and observer perspective, they were shown two cartoon stories about a boy who reads to his class and later remembers the event. In the first cartoon, he remembers it from the observer perspective (simplified to "mainly sees the whole of himself"). In the second cartoon, he recalls it from a field perspective (simplified to "mostly sees other people or other things").

Test materials

Children were shown three test items to assess their understanding of the observer and field perspectives. For the first test item, participants were shown two cards illustrating the observer and field perspectives of a boy remembering himself reading in front of his class; in the second test item, participants were shown two cards illustrating the observer and field perspectives of a girl remembering herself writing; and in the third test item participants were shown two cards illustrating the observer and field perspective of a girl buying a drink from a machine. In each case, participants were asked to identify which card illustrates the boy/girl remembering mainly the whole of him/herself and which card illustrates the boy/girl remembering mainly mostly other people or other things.

Participants needed to pass at least two of the three test items to continue with the study. Only one child (who was 13) failed to meet this criterion. He did not carry out the rest of the study. Of the remaining children, 83% passed all three tests, 17% passed two of the three tests.

Children were shown cards with a memory stimulus written on it. Four contained social anxiety memories (being called a nasty name by someone at school; speaking/reading in front of the class; doing a test/exam in school; and being left out of a game or conversation with others during break), and four contained physical anxiety memories (waking up from a nightmare; watching a frightening movie/program on television; falling over and hurting yourself a lot, for example, seeing the blood on your knee; and seeing a large spider in your bedroom, or a nasty dog looking at you, or a scary animal). All children were shown these memory cards one at a time, and asked to recall a time when s/he was in that situation.

A pilot study with six children aged between 6 and 9 (two were 6 years old, three were 7 years old, one was 9 years old) was carried out to ensure that the children understood the materials. All children in the pilot study reported that they understood the materials and the scales used and they were all able to complete all the tasks.

Procedure

Ethical approval was obtained by the University Ethics Committee (see Appendix C). Children were seen individually in a quiet room. First they were taught how to use the distress rating scale and asked to complete three practice trials using the following instructions:

"This line measures feelings. At this end of the line it says 'I feel okay"… as we go further up the line, the feelings become more upset … see here it says ' I feel a bit upset', and here 'I feel quite upset', and then ' I feel upset', and then ' I feel very upset' and then 'I feel terribly upset' and then near the top it says 'I feel extremely upset'. We are going to use this scale to show how upset you feel about different things later on, but lets practice now.

Remember, you can put a mark anywhere you want to on this line. If you felt very upset, where would you put the mark ….Lets try another one, if you felt the most upset you've ever been, where would you draw a mark? … And if you, felt not upset at all, in fact lets pretend you felt better than okay, where would you draw the mark?"

Next, the children were taught the two memory perspectives using the cartoon strips, followed by the administration of the perspective test items. Then the children were asked to recall memories using the memory cards, asked which perspective they had used to recall the memory, how distressed they felt at recalling the memory now and how old they were at the time the event occurred. The memory cards were then shown one at a time and presented in a random order. The instructions used were similar to those used in previous studies with adults (e.g. Coles et al., 2001):

"I am going to show you some cards. Each card has something written on it and I want you to remember the last time you were in that situation and then I will ask you some questions about it. Okay, here is the first one. Think about a time when …[the description on the first memory card was read aloud]. Take your time. Once you have the picture in your head, close your eyes and get as clear a picture as you can. Tell me when you are ready. Okay, keeping

your eyes closed I want to ask you some questions about the picture. Do you mainly see the whole of yourself or do you mostly see other people or other things?"

Once all the memory tasks were complete, the children completed the social anxiety, depression and anxiety scales in that order. Children were asked if they wanted the experimenter to read the questionnaire items to them, using a separate questionnaire so that they could score their answers privately. Forty-seven percent of children were read their questionnaires. Participants were then asked to visualize a happy memory (to ensure they were not taking away a negative image) and debriefing sheets were read to them.

Results

Participant Characteristics

The mean, standard deviation and range of scores obtained by the three groups of children on the social anxiety, anxiety and depression self-report measures are shown in Table 1.

Table 1

Mean, Standard Deviation and Range of Scores on the Social Anxiety Scale for Children-Revised (SASC-R) and Social Anxiety Scale for Adolescents (SAS-A), Revised Children's Manifest Anxiety Scale (RCMAS) and the Children's Depression Inventory – short form (CDI-S).

	7-8 year olds (n = 19)		10-11 year olds (n =19)		13-14 year olds (n = 20)	
Measures	*M* (*SD*)	Range	*M* (*SD*)	Range	*M* (*SD*)	Range
			Social anxiety			
SASC-R/	56.68	40 – 73	46.05	26 – 62	42.50	24 - 62
SAS-A	(9.05)		(9.04)		(9.65)	
FNE	24.89	16 – 33	21.84	14 – 29	20.40	12 - 31
	(5.07)		(4.48)		(5.34)	
			Anxiety			
RCMAS	57.11	35 – 76	48.79	35 – 62	49.55	53 - 63
	(10.55)		(8.24)		(8.66)	
SCC	11.79	5 – 17	9.31	5 – 14	9.5	6 - 13
	(3.5)		(2.7)		(2.31)	
			Depression			
CDI-S	53.00	43 – 66	46.79	40 – 65	49.70	39 - 80
	(5.43)		(6.12)		(9.75)	

Note SCC = Social Concern Concentration Subscale on the RCMAS. FNE = Fear of Negative Evaluation Subscale on the SASC-R or SAS-A

To explore potential differences between the age groups on these measures, a one-way ANOVA was used. Significant differences were found for all scales: anxiety, $F(2, 55) = 4.78, p < .01$, social anxiety, $F(2, 55) = 12.26, p < .01$, FNE, $F(2, 55) = 4.10, p < .0.5$, social concern , $F(2, 35.30) = 3.39, p < .05$ and depression, $F(2, 35.59) = 5.40, p < .01$. Post hoc analyses showed that the youngest children reported significantly more anxiety ($p < .05$) and social anxiety ($p < .01$) than the other two groups. They also reported significantly higher levels of FNE than the oldest group ($p < .05$) and reported more depression than the 10 - 11year olds ($p < .01$). As scores on the self-report measures significantly differed according to the child's age, this variable was controlled for in all subsequent analyses using these measures. Further analyses confirmed that there were significant correlations between all self-report measures (for all correlations $p < .01$, see Table A1).

Analysis

To obtain scores for the observer and field perspectives, children were given a score of one for each social memory recalled from an observer perspective, giving a total possible score of 0 - 4. Children were also given a score of one for each physical memory recalled from an observer perspective, giving a total possible score of 0 - 4. These scores were combined to give the total number of observer perspective memories recalled, making a total score of 0 - 8 across both social and physical memories.

Data analysis looked at whether children recalled both observer and field perspective memories and explored whether the use of the observer perspective

differed according to the type of memory (social or physical) and child's age. Wilcoxon Sign-Rank tests were used for all these analyses. The relationships between the observer perspective, social anxiety, anxiety and depression were then explored using partial correlations, controlling for children's age. Further analyses were conducted to see if there were differences in the memory characteristics (memory age and distress levels) between the two types of memory (social and physical) using ANOVAs. In addition, it explored whether the use of the observer perspective was related to these other memory characteristics (memory age and distress) and whether social anxiety, anxiety and depression were related to the memory characteristics using partial correlations, controlling for child's age. All significant findings are reported with two-tailed *p* values, and after the application of Bonferroni correction, where possible.

Observer and Field Perspectives.

To explore whether children used both observer and field perspectives, a Wilcoxon Signed-Rank Test was carried out comparing the mean ranks for all field perspective memories and the mean ranks for all observer perspective memories. This showed that significantly more field perspective (*mdn* = 5) than observer perspective (*mdn* = 3) memories were recalled, $T = 5.34$, $p < .001$.

Observer Perspective, Memory Type, Child's Age and Social Anxiety

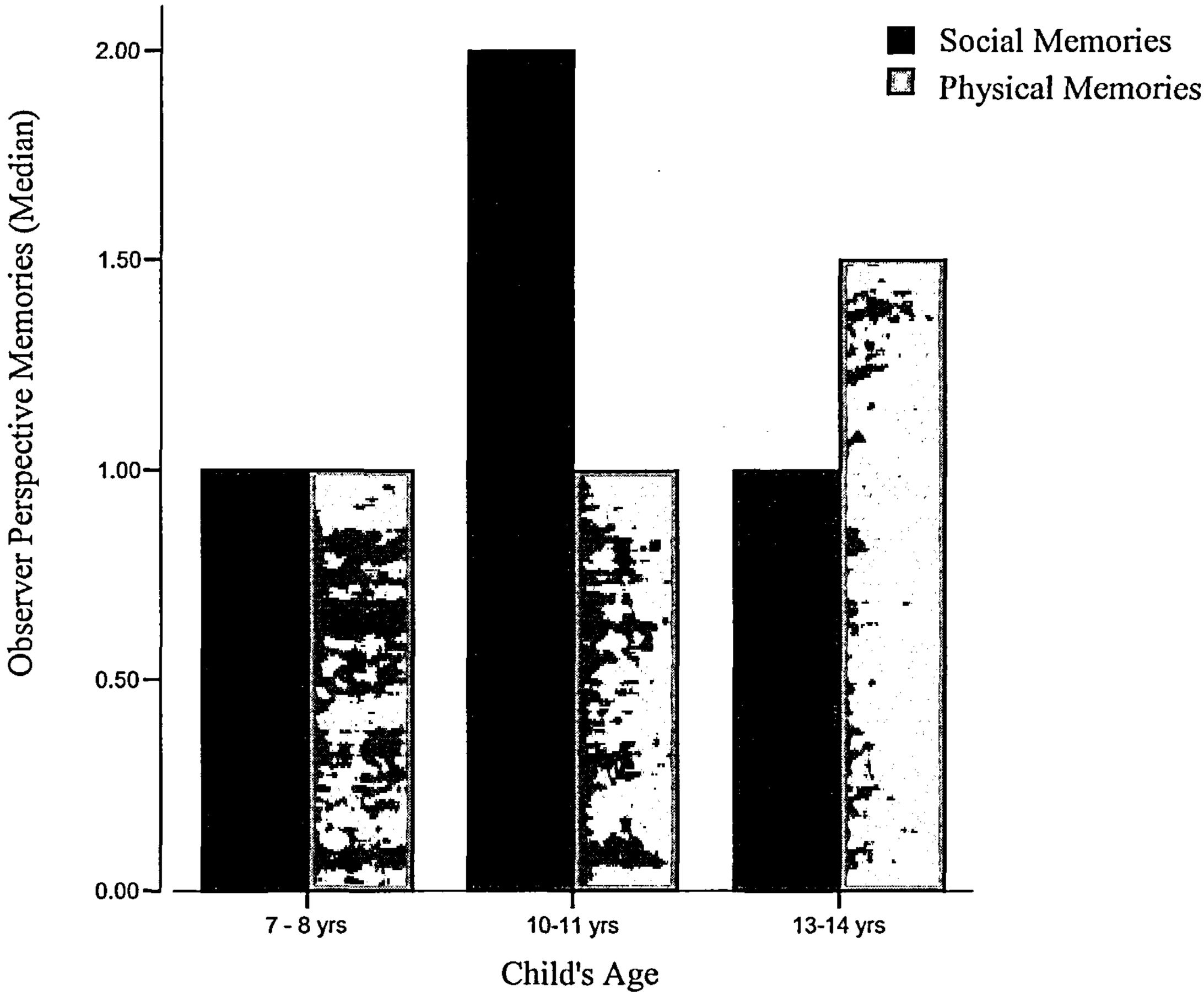
The relationship between the observer perspective and type of memory, age of the child and level of reported symptoms of social anxiety were explored. The median number of observer perspective memories for each memory type is illustrated in Figure 1. Seven to eight year olds recalled 1 observer perspective social memory

(range 0-3) and 1 observer perspective physical memory (range 0-3) on average[1]. Ten to eleven year olds recalled on average olds recalled 2 observer perspective social memories (range 0-3) and 1 observer perspective physical memory (range 0-3) on average. Thirteen to fourteen year olds recalled 1 observer perspective social memory (range 0-4) and 1.5 observer perspective physical memories (range 0-2) on average. To see whether the number of observer perspective memories recalled was different for social and physical memories, and to see if this differed across the age groups, three Wilcoxon signed-rank tests were carried out. No significant differences were found for the any of the age groups (7-8 year olds: $T = -.87$, $p = ns$; 9-10 year olds: $T = -1.656$ $p = ns$; 13-14 year olds: $T = -.441$, $p = ns$).

[1] Median scores are reported here

Figure 1:

Median Number of Social and Physical Observer Perspective Memories



To see if the use of the observer perspective varied according to the type of memory and level of social anxiety, partial correlations were carried out using scores on the SASC-R, SAS-A and FNE. Because scores on the self-report measures significantly differ according to the child's age, age was controlled for in the correlations. As Table 2 shows, there were no significant relationships between FNE, social anxiety, and the use of the observer perspective for either type of memory.

Table 2:

Correlations of Observer Perspective Memories (OP) and Scores on the Social Anxiety Scale for Children-Revised (SASC-R) and Social Anxiety Scale for Adolescents (SAS-A).

	1.	2.	3.	4.	5.
1. No. of OP Memories	--	.76**	.59**	-.07	.04
2. No. of OP SM		--	-.07**	-.07	-.02
3. No. of OP PM			--	-.03	.08
4. FNE				--	.85**
5. SASC-R/SAS-A					--

Note. SM = Social Memories. PM = Physical Memories. FNE = Fear of Negative Evaluation Subscale on the SCAS-R or SAS-A.

** $p < .001$.

Further analyses investigated whether the observer perspective was related to anxiety and depression. No significant relationships were found (see Tables A2 and A3).

Relationship between Observer Perspective and other Memory Characteristics

Before analyses were carried out to see if other memory characteristics (i.e. memory age and level of distress) were related to the use of observer perspective, differences in memory age and distress for social and physical memories were explored in the three age groups. Seven to eight year olds recalled 4.11 social

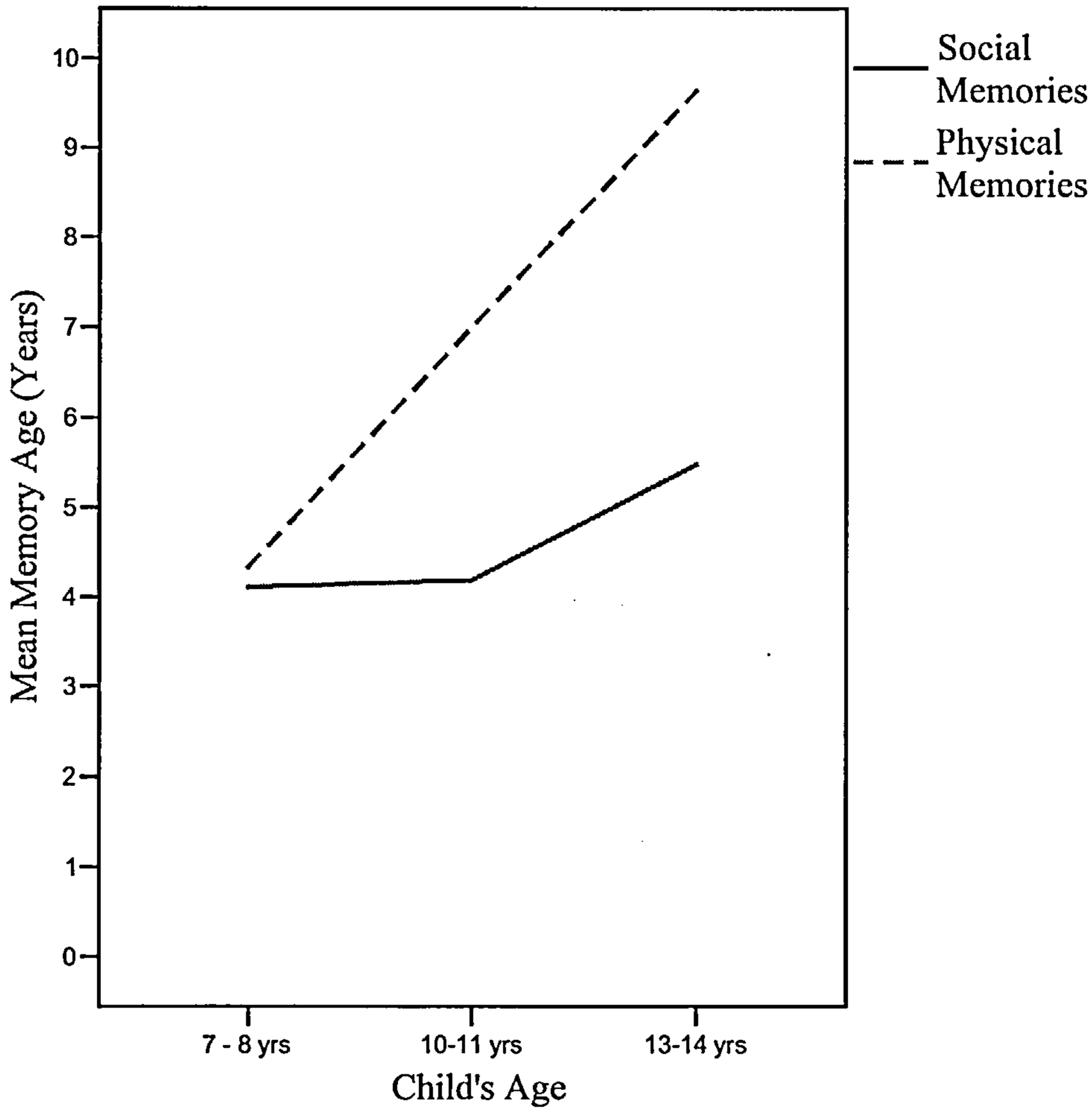
memories (*SD* = 3.71, range = 0.5 -14) and 4.74 physical memories (*SD* = 4.15, range = 0 -12) on average[2]. Ten to eleven year olds recalled 4.18 social memories (*SD* = 2.64, range = 0 -10) and 7.00 physical memories (*SD* = 2.86, range = 1 -12) on average. Thirteen to fourteen year olds recalled 5.47 social memories (*SD* = 2.93, range = 1.5 -12) and 9.73 physical memories (*SD* = 3.67, range = 3.5 -19) on average.

To see if there were differences between the age of social and physical memories, differences in the age of memories recalled by children in each age group, and to see if the age of memories differed between the three age groups depending on the type of memory, a 2 (memory type) x 3 (age group) mixed measures ANOVA was conducted. There was a main effect for type of memory, $F(1, 52) = 24.08$, $p<.001$, a main effect of age group, $F(2, 52) = 6.42$, $p<.01$, and an interaction between memory type and age, $F(2, 52) = 5.50$, $p<0.01$. Post hoc analyses showed that the oldest children had significantly older social ($p <.01$) and physical memories ($p < .001$) than the youngest children. The oldest children and the children in the middle age group had significantly older physical memories compared to social memories ($p < .001$ for both groups). There was no difference between the age of the physical and social memories for the youngest group ($p = ns$) (see Figure 2).

[2] Mean scores are reported here

Figure 2:

Mean Age of Physical and Social Memories for the Three Age Groups



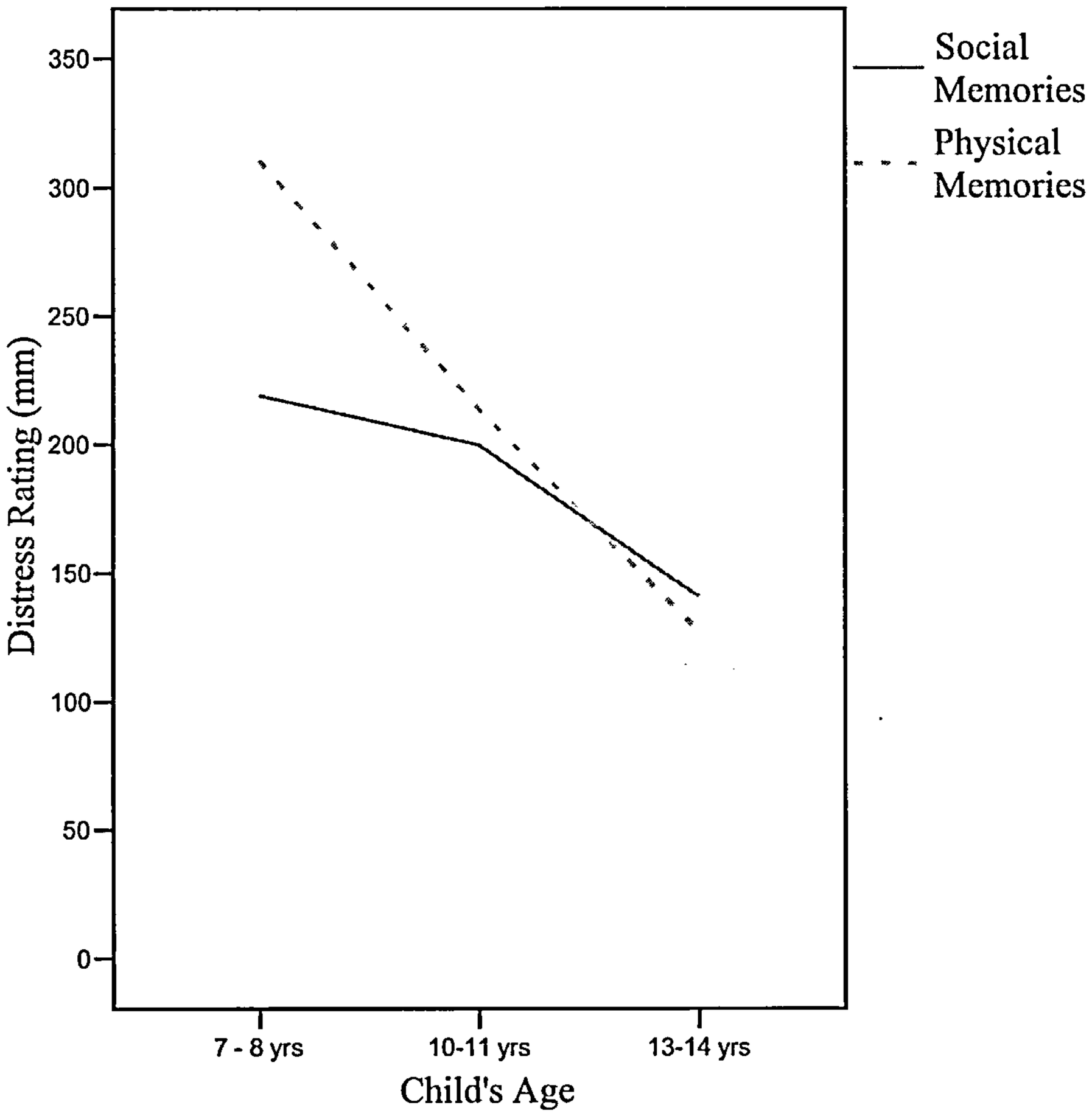
The maximum possible level of distress for each memory was 150, and the minimum possible was 0. Seven to eight year olds had a mean distress rating of 219.00 mm for all social memories (*SD* = 89.63, range = 34 -364) and a mean distress rating of 310.37 mm for all physical memories (*SD* = 139.91, range = 27 - 568). Ten to eleven year olds had a mean distress rating of 199.79 mm for all social memories (*SD* = 96.01, range = 33 -349) and a mean distress rating of (*M*) 213.89 mm for all physical memories (*SD* = 111.62, range = 65 - 402). Thirteen to fourteen year olds had a mean distress rating of 140.95 mm for all social memories (*SD* =

86.90, range = 28 - 363) and a mean distress rating of 127.45 mm distress rating for all physical memories (*SD* = 65.97, range = 20 - 280).

To see whether levels of distress differed for social and physical memories, whether there were differences in the levels of distress reported by children in different age groups, and to see whether distress levels differed between the age groups depending on the type of memory, a 2 (memory type) x 3 (age group) mixed measures ANOVA was conducted. There was a main effect of memory type, $F(1, 55) = 7.01$, $p<.01$, a main effect for age groups, $F(2, 55) = 10.20$, $p<.001$, and an interaction between the memory type and age, $F(2, 52) = 7.35$, $p<.001$. Post hoc analyses showed that the oldest children were significantly less distressed by their memories than the 10 - 11year olds ($p<.05$) and than the youngest group ($p<.001$). The youngest children found physical memories more distressing than social ones ($p<.01$). There were no significant differences between levels of distress for social and physical memories for the other two groups ($p = ns$) (see Figure 3).

Figure 3:

Mean Level of Distress for Social and Physical Memories for Each Age Group



As there were group differences in the age of memories and in the distress ratings between the different age groups, child's age was controlled for in subsequent analyses.

Observer Perspective and Memory Characteristics

In order to explore relationships between the use of the observer perspective, memory age and memory distress for each memory type, partial correlations were used. As shown in Table 3 and Figure 4, use of observer perspective for social

memories significantly correlated with the age of social memories. This relationship was not found for physical memories.

Table 3

Relationship Between Observer Perspective and Memory Age

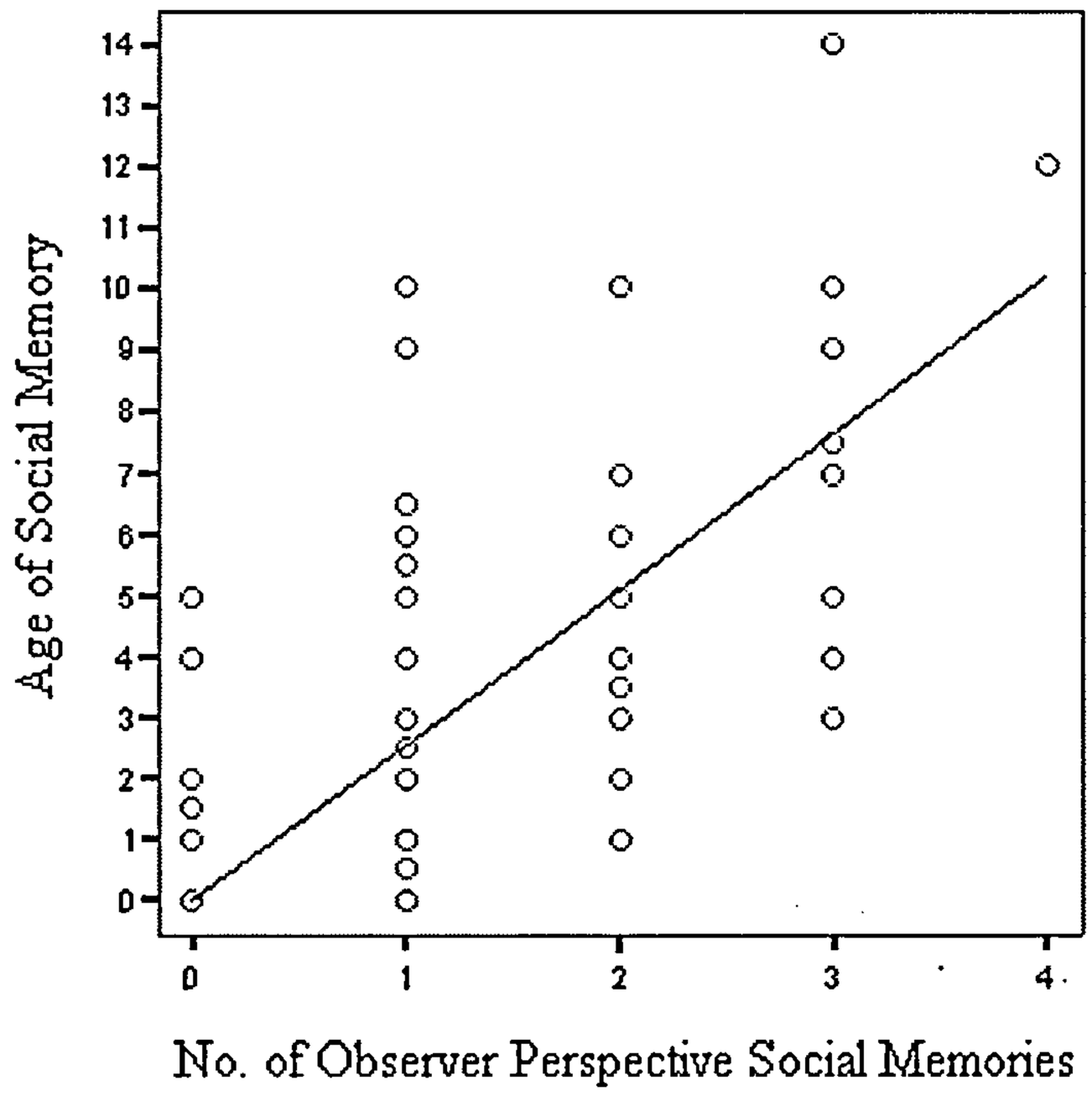
	1.	2.	3.	4.	5.	6.
1. No. of OP Memories	--	.76***	.61***	.49***	.15	.38***
2. No. of OP SM		--	-.05	.52***	.08	.35***
3. No. of OP PM			--	.11	.14	.15
4. Age of SM				--	.37***	.82***
5. Age of PM					--	.84***
6. Age of All Memories						--

Note. OP = Observer Perspective. SM = Social Memories. PM = Physical Memories

*** $p < .001$

Figure 4:

Correlation of Observer Perspective Social Memories with Age of Social Memories.



As can be seen in Table 4, there was no relationship between observer perspective and distress.

Table 4:

Correlation of Number of Observer Perspective Memories with Level of Distress

	1.	2.	3.	4.	5.	6.
1. No. of OP Memories	--	.76***	.59***	.16	.23	.08
2. No of OP SM		--	.19	.15	.19	
3. No. of OP PM			--	.17	-.11	
4. Distress for All Memories				--	.88***	.92***
5. Distress for SM					--	.63***
6. Distress for PM						--

Note. OP = Observer Perspective. SM = Social Memories. PM = Physical Memories

*** $p < .001$

Relationship between memory characteristics and anxiety, social anxiety and depression.

To see if there were relationships between memory characteristics and self-report measures, partial correlations, controlling for age, were used. There were no significant relationships between the age of memories and anxiety, social anxiety and depression measures (see Table A4). There were significant correlations between levels of distress and anxiety, social anxiety and depression (see table 5).

Table 5:

Correlations of Distress with Scores on the Social Anxiety Scale for Children-Revised (SASC-R) and Social Anxiety Scale for Adolescents (SAS-A), Revised Children's Manifest Anxiety Scale (RCMAS) and the Children's Depression Inventory – short form (CDI-S).

	1.	2.	3.	4.	5.	6.	7.	8.
1. SASC-R/SAS-A	--	.84***	.63***	.56***	.57***	.38***	.36**	.33**
2. FNE		--	.73***	.58***	.55***	.37***	.37***	.29*
3. RCMAS			--	.78***	.54***	.28*	.23	.27*
4. SCC				--	.54***	.21	.22	.16
5. CDI-S					--	.28*	.40***	.14
6. Distress for All Memories						--	.88***	.92***
7. SM Distress							--	.62***
8. PM Distress								--

Note. FNE = Fear of Negative Evaluation Subscale on the SCAS-R or SAS-A. SCC = Social Concern/Concentration Subscale. SM = Social Memories. PH = Physical Memories.

*$p < .05$. ***$p < .001$.

A highly significant relationship was found between levels of distress and scores on the social anxiety scales (SASC-R and SAS-A). This relationship existed for both types of memories. This suggests that the more socially anxious the child

was the more likely s/he was to recall distressing memories, regardless of the type of memory. This relationship also existed for those with high fear of negative evaluation, except the relationship was stronger for social memories (it had greater significance level, $p < .001$) than for physical memories ($p < .05$). A significant relationship was found between levels of distress and scores on the RCMAS. There was also a significant relationship between levels of distress for physical memories and the RCMAS, but only a trend towards a significant relationship between distress for social memories and the RCMAS. A significant relationship was found between levels of distress on social memories and scores on the CDI. This suggested that the more depressed the child was, the more distressed s/he felt at recalling social memories.

Discussion

The study's aim was to investigate whether children recall memories of social and physical events using both observer and field perspectives. Two subsidiary aims were to explore whether older children recall more observer perspective memories, and whether use of the observer perspective varies according to the type of memory and level of social anxiety. Further analyses also investigated whether there were relationships between use of observer perspective and levels of memory distress and memory age, for each memory type.

This study showed that children as young as seven recall memories from both the observer and field perspectives. Children in all three age groups recalled a similar number of observer perspective memories and there were no differences in the number of observer perspective memories in relation to field perspective memories recalled by the different age groups. Use of the observer perspective was not related

to social anxiety or memory type. Further analyses showed that more observer perspective memories were recalled the older the social memory was. However, use of the observer perspective was not related to the level of memory distress for either physical or social memories.

The finding that children recall memories using both perspectives, is consistent with adult studies of memory perspective (e.g. Nigro & Neisser, 1983). It highlights the similarities between memory recall in adults and children. However, the finding that observer perspective social memories were not related to reported symptoms of social anxiety is not consistent with the predictions of the adult models, and the studies that have been carried out with adults (e.g. Wells, Clark, & Ahmad, 1998).

It is possible that the observer perspective is not applicable to the understanding of children's social anxiety. Although this study demonstrated that children as young as 7 years can and do recall memories from an observer perspective, there may be important developmental differences between adults and children. For example, it is possible that children do not construct an internal self-view until later in development. Indeed, it has been suggested that self-concept becomes increasingly more developed towards the end of adolescence (Neshat-Doost, Taghavi, Moradi, Yule, & Dalgleish, 1998). In this case, although children can construct observer perspective memories, they may not construct the negative self-image that appears to be crucial in the maintenance of anxiety in adult models.

Another possibility is that differences between socially anxious children's and adults' memories of social situations are a consequence of differences in attentional biases. The way in which memories are remembered is likely to depend on how the situation was processed during the event. The adult models, particularly

Rapee and Heimberg's (1997) model, suggest that socially anxious individuals process both external sources of threat (such as negative interpretations of other people's behavior) and internal ones (symptoms of anxiety and self-image). Socially anxious children may not have attended to or processed an observer perspective image of themselves during the event.

There are several possible explanations for this. First, for a number of children, as they get older their anxiety diagnoses change (Last, Perrin, Hersen, & Kazdin, 1992). This suggests that anxiety may be less differentiated in children and therefore attentional processes may not be orientated towards specific types of threat (Mayer, Merckelbach, & Muris, 1999). Second, as children are likely to be closer to the onset of their anxiety than adults, they may show less activation of attentional biases. In contrast, adults' attentional biases are well developed after years of activation (Waters, Lipp, & Spence, 2004). Third, attending to several sources of threat simultaneously may require either multiple processing or an ability to switch between the different forms of attention. It is possible that children focus on only external or environmental sources of threat (e.g. potential signs of disapproval by other people), rather than having self-focused attention. Studies with children high in trait anxiety show attentional biases towards external threat (e.g. Vasey, Daleiden, Williams, & Brown, 1995). However, further research needs to investigate whether these attentional biases exist within socially anxious children and whether socially anxious children also attend to internal symptoms of anxiety whilst in anxiety provoking situations. Fourth, studies with adults have found that the observer perspective may be related to attributions, specifically, observer perspective memories are more likely to occur when the person thinks they are at fault or responsible for something (Frank & Gilovich, 1989). It is possible that socially

anxious children show more external attributions than socially anxious adults. External attributions are more common in children under 8 (e.g. Johnson & Lee, 2005) and have been associated with anxiety sensitivity in adolescents (Ginsburg, Lambert, & Drake, 2004). Although in depressed children and adolescents, negative outcomes are associated with more internal attributions; conversely positive outcomes are associated with more external attributions (Gladstone & Kaslow, 1995).

The present study found that observer perspective social memories were related to memory age. This is consistent with the findings from studies carried out with adults (Coles et al., 2001; Nigro & Neisser, 1983), and it raises potential questions about why the observer perspective is commonly found in the adult studies. In the present study, the children's memories tended to be only four to five years old, whereas, the age of social memories found in studies carried out with adults with social phobia, appear to be much older, having become fixed at an early age (Hackmann et al., 1998). It is possible that the frequency of the observer perspective in adults with social anxiety is a consequence of the fact that they have had social anxiety for many years, and that they have repeatedly remembered and thought about social incidents. It has been suggested that repeated retrieval and rehearsal might alter memories recalled from a field perspective into ones recalled from an observer perspective (Robinson & Swanson, 1993). A recent study provides some evidence for this, observer perspective images were found to increase over the weeks following a social anxiety interaction (Coles et al., 2002).

Before considering the potential limitations of this study, it is important to point out that a number of factors attest to the validity of the measures and materials used. First, there is evidence that the children understood the observer and field

concepts because the pattern of observer and field perspective memories recalled was similar for all the age groups, suggesting consistent use of the perspectives. Furthermore, the children were more likely to recall older social memories from an observer perspective, which is consistent with adult studies (Coles et al., 2002; and Nigro & Neisser, 1983) and also suggests similar use of the perspective. Second, there was some differentiation between the type of anxiety and the type of memory distress. The higher the scores on the FNE, the greater the distress when recalling social, compared to physical events. In contrast, the generally anxious children rated both physical and social memories as equally distressing.

There were also some differences in the distress patterns and in the age of memories between the age groups, depending on the type of memory. The youngest children found physical memories more distressing than social ones, whereas the other two groups found social and physical memories equally distressing. To some extent, this reflects the literature on fear, which has found that physical fears become less prominent as children get older and that social issues become more important in teenage years (Morris & Kratchowill, 1991; Ollendick, King , & Yule, 1994). It is also possible that the older children had older physical memories because the stimuli were less relevant for them. Even if this is the case, the characteristic differences between social and physical memories suggests that the individual memories within each category (social or physical) have shared characteristics and that the stimuli used to access social memories evoked qualitatively different types of memories to those used to access physical memories.

Furthermore, the findings in this study cannot be attributed to a lack of social anxiety within the sample as a whole. Social anxiety scores were normally distributed and therefore contained participants with both high and low levels of

social anxiety. However, the spread of social anxiety scores across the age groups could have affected the findings. The majority of children with high social anxiety symptoms (exceeding clinical cut off points set by La Greca, 1999) were in the 7 - 8 year group (n = 13). In contrast, most of the older children had moderate levels of anxiety with only 5 children in each of the older age groups reaching the clinical cut off levels. They also had lower levels of FNE than the 7 - 8 year olds. It is possible that the observer perspective is a characteristic of social anxiety in older children, but not in the younger age group. Therefore, the findings in this study may reflect a low proportion of highly anxious older children. However, all social anxiety scores for all the age groups were within the norms cited by La Greca (1999) and their distribution across the age groups is consistent with some studies carried out with non-patient populations (e.g. La Greca & Stone, 1993). This suggests that this sample was representative of the normal population.

Clinical Implications

The findings from this study suggest that the observer perspective component of the adult models of social anxiety may not be applicable for non-clinical children with social anxiety under the age of 14 years. This suggests that the observer perspective may not be a relevant component for child models of social anxiety.

Limitations

The following limitations should be noted. First, the events used in this study may not have been distressing enough as some of the children with high social anxiety gave the social memories quite low distress ratings. This is important as a study carried out with adults found that it was only the very high social anxiety

provoking situations that resulted in an observer perspective (Coles, et al., 2001). Adult studies have asked participants to recall any personal situation where they felt extremely anxious and uncomfortable. It is possible that if the children in this study had been asked to recall any social or physical anxiety provoking memory, they might have chosen ones that were more personally meaningful and distressing for them. However, avoidance is high in social anxiety and without prompts, children may have found it hard to retrieve memories.

Second, the present study's method for measuring observer and field perspective memories also differed to that used in adult studies. In the adult studies, participants are asked to rate how much their memory is an observer or field perspective memory using a scale from –3 (entirely field) to +3 (entirely observer perspective). This may have been a more sensitive measure than the binary one (choice between observer or field) used in this study, particularly as some of the children commented that they had both perspectives. Had a more sensitive measure been used, it is possible that an effect might have been found for the 10 – 11 year old age group, who recalled twice as many observer perspective memories than the other two age groups. However, the –3 to +3 scale was not used with the children, as we were unsure how much the 7 - 8 year olds would understand it. It is also not clear exactly what the likert scale used in the adult studies is measuring. Furthermore, the binary measure used in this study is consistent with the memory literature (e.g. Nigro & Neisser, 1983).

Third, given that only a small number of observer perspective memories were recalled, it is worth considering that the study might have been underpowered. Asking participants to recall more memories might have elicited more observer perspective memories, however, this would also have increased the demands placed

on each child. An alternative would have been to increase the number of children participating in the study.

Further Research

Finally, this study has raised a number of questions about the observer perspective and highlighted areas for future research. In order to identify why the observer perspective features in adult social anxiety, but not in child social anxiety, future experiments could investigate attention allocation in socially anxious children to see if they attend to more external sources of threat and/or the division of attention allocation between internal and external sources of threat. To test whether the observer perspective becomes a more fundamental feature with increasing age, the study needs to be replicated with older children and with adolescents who show more severe symptoms of social anxiety. The issue of attributions also needs to be considered. Furthermore, research is needed to explore more fully whether children with social phobia do construct negative self-images and whether these images are risk factors in the development of social phobia.

Conclusion

The present study is the first to investigate observer perspective memories in children and young adolescents. It found that children do recall memories using this perspective and that the use of the observer perspective is related specifically to the age of social memories. This raises an interesting question about the potential role of the observer perspective in social anxiety and suggests that the age of social memories should be explored further. The role of attributions and self-concept may also be worth further exploration. Due to methodological limitations, it is

recommended that the study be repeated with a wider age of adolescents, and with children diagnosed with social phobia.

References

American Psychiatric Association (1994). *Diagnostic and statistical manual of mental disorders (4th ed.)*. Washington, DC: Author.

Beidel, D. C., Turner, S. M., & Morris, T. L. (2000). Behavioral treatment of childhood social phobia. *Journal of Consulting and Clinical Psychology, 68*(6), 1072-1080.

Blaney, P. H. (1986). Affect and memory: A review. *Psychological Bulletin, 99*(2), 229-246.

Campbell, M. A., & Rapee, R. M. (1994). The nature of feared outcome representations in children. *Journal of Abnormal Child Psychology, 22*(1), 99-111.

Clark, D. M. (2001). A cognitive perspective on social phobia. In W. R. Crozier & L. E. Alden (Eds), *International handbook of social anxiety: Concepts, research and interventions relating to the self and shyness.* (pp. 405-430). Chichester: John Wiley & Sons.

Clark, D. M., & Wells, A. (1995). A cognitive model of social phobia. In R. G. Heimberg, M. R. Liebowitz, D. A. Hope, & F. R. Schneier (Eds), *Social Phobia: Diagnosis, assessment and treatment.* New York: Guildford.

Coles, M. E., Turk, C. L., & Heimberg, R. G. (2002). The role of memory perspective in social phobia: Immediate and delayed memories for role-played situations. *Behavioral and Cognitive Psychotherapy, 30*(4), 415-425.

Coles, M. E., Turk, C. L., Heimberg, R. G., & Fresco, D. M. (2001). Effects of varying levels of anxiety within social situations: relationship to memory perspective and attributions in social phobia. *Behavior Research and Therapy, 39*(6), 651-665.

Frank, M. G., & Gilovich, T. (1989). Effect of memory perspective on retrospective causal attributions. *Journal of Personality and Social Psychology, 57*(3), 399-403.

Ginsburg, G. S., La Greca, A. M., & Silverman, W. K. (1998). Social anxiety in children with anxiety disorders: Relation with social and emotional functioning. *Journal of Abnormal Child Psychology, 26*(3), 175-185.

Ginsburg, G. S., Lambert, S. F., & Drake, K. L. (2004). Attributions of control, anxiety sensitivity, and panic symptoms among adolescents. *Cognitive Therapy and Research, 28*(6), 745-763.

Gladstone, T. R. G., & Kaslow, N. J. (1995). Depression and Attributions in Children and Adolescents - a Metaanalytic Review. *Journal of Abnormal Child Psychology, 23*(5), 597-606.

Hackmann, A., Surawy, C., & Clark, D. M. (1998). Seeing yourself through others' eyes: A study of spontaneously occurring images in social phobia. *Behavioral and Cognitive Psychotherapy, 26*(1), 3-12.

Hackmann, Clark, D. M., & McManus, F. (2000). Recurrent images and early memories in social phobia. *Behaviour Research and Therapy, 38,* 601-610

Hirsch, C. R., Clark, D. M., Mathews, A., & Williams, R. (2003). Self-images play a causal role in social phobia. *Behavior Research and Therapy, 41*(8), 909-921

Hirsch, C. R., Clark, D. M., Mathews, A., & Williams, R. (2003). Self-images play a causal role in social phobia. *Behavior Research and Therapy, 41*(8), 909-921.

Hirsch, C. R., Meynen, T., & Clark, D. M. (2004). Negative self-imagery in social anxiety contaminates social interactions. *Memory, 12*(4), 496-506.

Hirsch, C. R., Meynen, T., & Clark, D. M. (2004). Negative self-imagery in social anxiety contaminates social interactions. *Memory, 12*(4), 496-506.

Hope, & F. R. Schneier (Eds.), *Social phobia: diagnosis, assessment, and treatment* (pp. 69-93). New York: Guilford Press.

Kovacs, M. (1992). *Children's Depression Inventory (CDI)*. San Antonio: Harcourt Assessment, Inc.

La Greca, A. M. (1999). *Manual of the Social Anxiety Scales for Children and Adolescents*. Available from author, Miami, FL.

La Greca, A. M., & Lopez, N. (1998). Social anxiety among adolescents: Linkages with peer relations and friendships. *Journal of Abnormal Child Psychiatry, 26,* 83-94.

La Greca, A. M., & Stone, W. L. (1993). Social-Anxiety-Scale-for-Children-Revised - Factor Structure and Concurrent Validity. *Journal of Clinical Child Psychology, 22*(1), 17-27.

La Greca, A. M., Dandes, S. K., Wick, P., Shaw, K., & Stone, W. L. (1988). Development of the Social Anxiety Scale for Children - Reliability and Concurrent Validity. *Journal of Clinical Child Psychology, 17*(1), 84-91.

La Greca, A. M., Silverman, W. K., & Wasserstein, S. B. (1998). Children's predisaster functioning as a predictor of posttraumatic stress following Hurrican Andrew. *Journal of Consulting and Clinical Psychology. 66*, 883-892.

Last, C. G., & Strauss, C. C. (1990). School refusal in anxiety-disordered children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 29*(1), 31-35.

Last, C. G., Hersen, M., Kazdin, A., Orvaschel, H., & Perrin, S. (1991). Anxiety disorders in children and their families. *Archives of General Psychiatry, 48*(10), 928-934.

Last, C. G., Perrin, S., Hersen, M., & Kazdin, A. E. (1992). DSM-III-R anxiety disorders in children: Sociodemographic and clinical characteristics. *Journal of the American Academy of Child and Adolescent Psychiatry, 31,* 1070-1076.

Mayer, B., Merckelbach, H., Muris, P. (1999). Spider-phobic children do not react with differential skin conductance responses to masked phobic stimuli. *Journal of Psychopathology and Behavioural Assessment, 21*(3), 237-248.

Morris, R. & Kratochwill, T. (1991). Childhood fears and phobias. In T. Kratochwill & R. Morris (Eds), *The Practice of Child Therapy* (pp. 76-114). New York: Pergamon.

Muris, P., Kindt, M., Bögels, S., Merckelbach, H., Gadet, B., & Moularert, V. (2000). Anxiety and threat perception abnormalities in normal children. *Journal of Psychopathology and Behavioral Assessment, 22,* 183-136.

Neshat-Doost, H. T., Taghavi, M. R., Moradi, A. R., Yule, W., & Dalgleish, T. (1998). Memory for emotional trait adjectives in clinically depressed youth. *Journal of Abnormal Psychology, 107*(4), 642-650.

Nigro, G., & Neisser, U. (1983). Point of View in Personal Memories. *Cognitive Psychology, 15*(4), 467-482.

Ollendick, T. H., King, N. J., & Frary, R. B. (1989). Fears in Children and Adolescents - Reliability and Generalizability across Gender, Age and Nationality. *Behaviour Research and Therapy, 27*(1), 19-26.

Ollendick, T. H., King, N. J., & Yule, W. (1994). *International Handbook of Phobic and Anxiety Disorders in Children and Adolescents.* New York: Plenum.

Rapee, R. M. (2001). The development of generalized anxiety disorder. In M.W. Vasey & M. R. Dadds (Eds), *The developmental psychopathology of anxiety.* (pp. 481-504). New York: Oxford University Press.

Rapee, R. M. (1995). Descriptive psychopathology of social phobia. In R.G. Heimberg, M. R. Liebowitz, D. A. Hope, & F. R. Schneier (Eds.), *Social Phobia: Diagnosis, Assessment and Treatment* (pp. 41-66). New York: Guildford Press.

Rapee, R. M. (2001). The development of generalized anxiety disorder. In M.W. Vasey & M. R. Dadds (Eds), *The developmental psychopathology of anxiety.* (pp. 481-504). New York: Oxford University Press.

Rapee, R. M., & Heimberg, R. G. (1997). A cognitive-behavioral model of anxiety in social phobia. *Behaviour Research and Therapy, 35*(8), 741-756.

Reynolds, C. R. (1980). Concurrent Validity of What I Think and Feel - the Revised Childrens Manifest Anxiety Scale. *Journal of Consulting and Clinical Psychology, 48*(6), 774-775

Reynolds, C. R. (1982). Convergent and Divergent Validity of the Revised Childrens Manifest Anxiety Scale. *Educational and Psychological Measurement, 42*(4), 1205-1212

Reynolds, C. R., & Richmond, B. O. (1978). What I Think and Feel - Revised Measure of Childrens Manifest Anxiety. *Journal of Abnormal Child Psychology, 6*(2), 271-280

Schneier, F. R., Johnson, J., Hornig, C. D., Liebowitz, M. R., & Weissman, M. M. (1992). Social Phobia - Comorbidity and Morbidity in an Epidemiologic Sample. *Archives of General Psychiatry, 49*(4), 282-288

Spurr, J. M., & Stopa, L. (2002). Self-focused attention in social phobia and social anxiety. *Clinical Psychology Review, 22*(7), 947-975.

Stopa, L., & Clark, D. M. (1993). Cognitive-Processes in Social Phobia. *Behaviour Research and Therapy, 31*(3), 255-267.

Strauss, C. C., & Last, C. G. (1993). Social and Simple Phobias in Children. *Journal of Anxiety Disorders, 7*(2), 141-152.

Vasey, M. W., Daleiden, E. L., Williams, L. L., & Brown, L. M. (1995). Biased Attention in Childhood Anxiety Disorders - a Preliminary-Study. *Journal of Abnormal Child Psychology, 23*(2), 267-279.

Verhulst, F. C., van der Ende, J., Ferdinand, R. F., & Kasius, M. C. (1997). The prevalence of DSM-III-R diagnoses in a national sample of Dutch adolescents. *Archives of General Psychiatry, 54*(4), 329-336.

Vernberg, E. M., Abwender, D. A., Ewell, K. K., & Beery, S. H. (1992). Social anxiety and peer relationships in early adolescence: A prospective analysis. *Journal of Clinical Child Psychology, 21*, 189-196.

Waters, A., Lipp, O., & Spence, S. (2004). Attentional bias toward fear-related stimuli: An investigation with nonselected children and adults and children with anxiety disorders. *Journal of Experimental Child Psychology, 89* (4), 320-33.

Wells, A., & Papageorgiou, C. (1998). Social phobia: Effects of external attention on anxiety, negative beliefs, and perspective taking. *Behavior Therapy, 29*(3), 357-370

Wells, A., & Papageorgiou, C. (1999). The observer perspective: biased imagery in social phobia, agoraphobia, and blood injury phobia. *Behaviour Research and Therapy, 37*(7), 653-658

Wells, A., Clark, D. M., & Ahmad, S. (1998). How do I look with my minds eye: perspective taking in social phobic imagery. *Behaviour Research and Therapy, 36*(6), 631-634

Woody, S. R. (1996). Effects of focus of attention on anxiety levels and social performance of individuals with social phobia. *Journal of Abnormal Psychology, 105*(1), 61-6

Zijlstra, F. R. H. (1993). Efficiency in work behaviour: A design approach for modern tools. Delft: Delft University Press.

Appendices

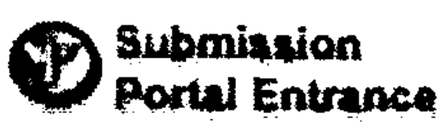
Appendix A: Notes for Contributors, Psychological Bulletin

Editor: Harris Cooper
ISSN: 0033-2909
Published Bimonthly, beginning in January

Instructions to Authors

Submit manuscripts electronically and send three printed copies to

Harris Cooper, Editor
Psychological Bulletin
213 West Duke Building
Duke University
Durham, NC 27708



according to the instructions provided below.

General correspondence may be directed to the Editor's Office.

Submission. Authors should submit three printed copies of each manuscript in addition to the electronic version submitted through the portal. If the submission portal is not used, authors should include a diskette with an electronic version of the manuscript along with the printed copies. All copies should be clear, readable, and on paper of good quality. An unusual typeface is acceptable only if it is clear and legible. In addition to addresses and phone numbers, authors should supply electronic mail addresses and fax numbers, if available, for potential use by the editorial office and later by the production office. Authors should keep a copy of the manuscript to guard against loss.

Manuscript preparation. Authors should prepare manuscripts according to the Publication Manual of the American Psychological Association (5th ed.).

Manuscripts may be copyedited for bias-free language (see chap. 2 of the Publication Manual). Formatting instructions (all copy must be double-spaced) and instructions on the preparation of tables, figures, references, metrics, and abstracts appear in the Manual. See APA's Checklist for Manuscript Submission.

Abstract and keywords. All manuscripts must include an abstract containing a maximum of 120 words typed on a separate page. After the abstract, please supply up to five keywords or brief phrases.

References. References should be listed in alphabetical order. Each listed reference should be cited in text, and each text citation should be listed in the References. Basic formats are as follows:

Gallo, L. C., & Matthews, K. A. (2003). Understanding the association between socioeconomic status and physical health: Do negative emotions play a role? *Psychological Bulletin, 129,* 10–51.

Hobfoll, S. E. (1998). *Stress, culture, and community: The psychology and philosophy of stress*. New York: Plenum Press.

Zuckerman, M., DePaulo, B. M., & Rosenthal, R. (1986). Humans as deceivers and lie detectors. In P.D. Blanck, R. Buck, & R. Rosenthal (Eds.), *Nonverbal*

communication in the clinical context (pp. 13–35). University Park: Pennsylvania State University Press.

Figures. Graphics files are welcome if supplied as Tiff, EPS, or PowerPoint. High-quality printouts or glossies are needed for all figures. The minimum line weight for line art is 0.5 point for optimal printing. When possible, please place symbol legends below the figure image instead of to the side. Original color figures can be printed in color at the editor's and publisher's discretion and provided the author agrees to pay half of the associated production costs; an estimate of these costs is available from the APA production office on request. Supplemental materials. APA can now place supplementary materials online, which will be available via the journal's Web page as noted above. To submit such materials, please see Supplementing Your Article With Online Material for details.

Masked review policy. The identities of authors will be withheld from reviewers until after determining the final disposition of the manuscript. Authors are responsible for the preparation of manuscripts to permit masked review. The first page of the printed manuscript should omit the author's names and affiliations but should include the title of the manuscript and the date it was submitted. A separate cover sheet should show the title of the manuscript, the authors' names and affiliations, the date the manuscript was submitted, and any footnotes (e.g., Author Note) containing information pertaining to the authors' identify or affiliations. Manuscripts submitted electronically should include the information on the separate cover sheet in the transmittal letter. Every effort should be made to ensure that the manuscript itself contains no clues to the authors' identities, including deletion of easily identified self-references from the list. If an author feels that revealing his or her identity is critical to receiving a fair review, such a request along with its justification should be made in the cover letter accompanying the manuscript.

Permissions. Authors are required to obtain and provide to the editor on final acceptance all necessary permissions to reproduce in print and electronic form any copyrighted work, including, for example, test materials (or portions thereof) and photographs of people.

Publication policies. APA policy prohibits an author from submitting the same manuscript for concurrent consideration by two or more publications. APA's policy regarding posting articles on the Internet may be found at Posting Articles on the Internet. In addition, it is a violation of APA Ethical Principles to publish "as original data, data that have been previously published" (Standard 8.13). As this journal is a primary journal that publishes original material only, APA policy prohibits as well publication of any manuscript that has already been published in whole or substantial part elsewhere. Authors have an obligation to consult journal editors concerning prior publication of any data on which their article depends.

In addition, APA Ethical Principles specify that "after research results are published, psychologists do not withhold the data on which their conclusions are based from other competent professionals who seek to verify the substantive claims through reanalysis and who intend to use such data only for that purpose, provided that the confidentiality of the participants can be protected and unless legal rights concerning proprietary data preclude their release" (Standard 8.14). APA expects authors submitting to this journal to adhere to these standards. Specifically, authors of manuscripts submitted to APA journals are expected to have available their data

throughout the editorial review process and for at least 5 years after the date of publication.

Authors will be required to state in writing either that they have complied with APA ethical standards in the treatment of their sample, human or animal, or that their study did not involve human or animal subjects. Please include this statement in the cover letter. A copy of the APA Ethical Principles may be obtained electronically or by writing the APA Ethics Office, 750 First Street, NE, Washington, DC 20002-4242.

APA requires authors to reveal any possible conflict of interest in the conduct and reporting of research (e.g., financial interests in a test or procedure, funding by pharmaceutical companies for drug research). Authors of accepted manuscripts will be required to transfer copyright to APA.

Preparing files for production. If your manuscript is accepted for publication, please follow the guidelines for file formats and naming provided at Preparing Your Electronic Files for Production. If your manuscript was mask reviewed, please ensure that the final version for production includes a byline and full author note for typesetting.

APA Service Center
750 First Street, NE • Washington, DC • 20002-4242
Phone: 800-374-2721 • 202-336-5510 • TDD/TTY: 202-336-6123
Fax: 202-336-5502 • Email

Appendix B: Notes for Contributors, Journal of Abnormal Child Psychology

Instructions to Authors

Authors should ensure that their manuscripts and cover letters meet the criteria below and submit electronically (.rtf, PDF, or .doc) to the editor.

David Watson, PhD
Editor, *Journal of Abnormal Psychology*
Department of Psychology
The University of Iowa
Iowa City, IA 52242-1407

Submission Portal Entrance

General correspondence may be directed to the Editor's Office.

In addition to postal addresses and telephone numbers, authors are requested to supply electronic mail addresses and fax numbers, if available, for potential use by the editorial and production offices. Authors should keep a copy of the manuscript to guard against loss.

Masked reviews are optional and must be specifically requested in the cover letter accompanying the submission. For masked reviews, each copy of the manuscript must include a separate title page with the authors' names and affiliations, and these ought not to appear anywhere else in the manuscript. Footnotes that identify the authors must be typed on a separate page. Authors are to make every effort to see that the manuscript itself contains no clues to their identities.

Most of the articles published in the *Journal of Abnormal Psychology* are reports of original research, but other types of articles are acceptable. Short Reports of replications or of failures to replicate previously reported results are given serious consideration. Comments on articles published in the journal are also considered. Case studies from either a clinical setting or a laboratory will be considered if they raise or illustrate important questions that go beyond the single case and have heuristic value. Manuscripts that present or discuss theoretical formulations of psychopathology, or that evaluate competing theoretical formulations on the basis of published data, may also be accepted. Finally, the Journal will consider articles that present, explicate, or evaluate experimental or analytic methods of particular relevance to psychopathology. For further information on content, authors may refer to the Journal Description.

Manuscript preparation. Authors must prepare manuscripts according to the *Publication Manual of the American Psychological Association* (5th ed.).

Abstract and keywords. All manuscripts must include an abstract that contains 125–180 words typed on a separate sheet of paper. After the abstract, please supply up to five keywords or brief phrases. All copy must be double-spaced, and further typing instructions, especially in regard to tables, figures, references, metrics, and abstracts, appear in the Manual. See APA's Checklist for Manuscript Submission. Also, all manuscripts are copyedited for bias-free language (see chap. 2 of the Publication Manual).

References. References should be listed in alphabetical order. Each listed reference should be cited in text, and each text citation should be listed in the References.

Figures. Graphics files are welcome if supplied as Tiff, EPS, or PowerPoint. High-quality printouts or glossies are needed for all figures. The minimum line weight for line art is 0.5 point for optimal printing. When possible, please place symbol legends below the figure image instead of to the side. Original color figures can be printed in color at the editor's and publisher's discretion provided the author agrees to pay $255 for one figure, $425 for two figures, $575 for three figures, $675 for four figures, and $55 for each additional figure.

Articles will be published in six different sections of the *Journal*: Brief Reports, Regular Articles, Extended Articles, Case Studies, Commentaries, and Theories and Methods. In preparing a Brief Report, authors should to set the character–space limit at 60 characters per line and should not exceed 410 lines of text and references (exclusive of the title page, abstract, author note, footnotes, tables, and figures). There should be no more than two figures or tables. For Brief Reports, the length limits are exact and must be strictly followed.

In preparing a Brief Report, authors should use 12-point Times Roman type with 1-in. (2.54-cm) side margins and should not exceed 16 pages of text and references (exclusive of the title page, abstract, author note, footnotes, tables, and figures). There should be no more than two figures or tables. Regular Articles addressing theories and methods should not exceed 36 manuscript pages (text and references). Extended Articles are published within regular issues of the Journal (they are not free-standing) and are reserved for manuscripts that require extended exposition (beyond what is possible in the 36-page limit for Regular Articles). Typically, Extended Articles will report multiple experiments, multifaceted longitudinal studies, transdisciplinary investigations, or studies that are extraordinarily complex in terms of methodology or analysis. Case Studies and Commentaries have the same length requirements as Brief Reports.

Components of all cover letters, in addition to items 1-4 below, will contain the following: (a) the full postal and email address of the corresponding author; (b) the complete telephone and fax numbers of the same; (c) the proposed category under which the manuscript was submitted; and (d) a request for masked review, if desired, along with a statement ensuring that the manuscript was prepared in accordance with the guidelines above.

Permissions. Authors are required to obtain and provide to the editor on final acceptance all necessary permissions to reproduce any copyrighted work, including, for example, test instruments and other test materials or portions thereof. A statement addressing permissions should be included in the cover letter regarding any submitted work containing any of these listed (or similar) items. Final files for production should be prepared as outlined in Preparing Your Accepted Manuscripts for Production.

Publication policy. APA policy prohibits an author from submitting the same manuscript for concurrent consideration by two or more publications. APA's policy regarding posting articles on the Internet may be found at Posting Articles on the Internet. In addition, it is a violation of APA Ethical Principles to publish "as original data, data that have been previously published" (Standard 8.13). As this journal is a primary journal that publishes original material only, APA policy also prohibits the publication of any manuscript that has already been published in whole or substantial part elsewhere. Authors have an obligation to consult journal editors about prior publication of any data on which their article depends. As such, corresponding

authors need to clearly state in the cover letter that (a) the manuscript or date, in whole or substantial part, has not been previously published or presented; and (b) that the manuscript is not currently being considered by other journals nor will it be while it is under consideration of the *Journal of Abnormal Psychology*.

In addition, APA Ethical Principles specify that "after research results are published, psychologists do not withhold the data on which their conclusions are based from other competent professionals who seek to verify the substantive claims through reanalysis and who intend to use such data only for that purpose, provided that the confidentiality of the participants can be protected and unless legal rights concerning proprietary data preclude their release" (Standard 8.14). APA expects authors submitting to this journal to adhere to these standards. Specifically, authors of manuscripts submitted to APA journals are expected to ensure the availability of their data throughout the editorial review process and for at least 5 years after the date of publication. Authors should state in a signed cover letter that they have complied with APA ethical standards in the treatment of their sample, human or animal. A copy of the APA Ethical Principles may be obtained from the APA Ethics Office web site or by writing the APA Ethics Office, 750 First Street, NE, Washington, DC 20002-4242. The cover letter should also indicate that no substantial portion of the article has appeared or is being considered for publication elsewhere.

Last, as the APA requires authors to reveal any possible conflict of interest in the conduct and reporting of research (e.g., financial interests in a test procedure, funding by pharmaceutical companies for drug research), authors must disclose the presence or absence of such conflicts in the cover letter.

Authors of accepted manuscripts will be required to transfer copyright to APA.

Preparing files for production. If your manuscript is accepted for publication, please follow the guidelines for file formats and naming provided at Preparing Your Accepted Manuscript for Production. If your manuscript was mask reviewed, please ensure that the final version for production includes a byline and full author note for typesetting.

Appendix C: Letter confirming ethical approval.

University of Southampton

School of Psychology

University of Southampton
Highfield Southampton
SO17 1BJ United Kingdom

Tel +44 (0)23 8059 5000
Fax +44 (0)23 8059 4597

28 September 2006

Jacqueline Boyle
School of Psychology
University of Southampton
Southampton
SO17 1BJ

Dear Jacqueline,

Re: Social Anxiety and the Observer Perspective in Children

I am writing to confirm that the above titled ethics application was approved by the School of Psychology Ethics Committee in September 2004.

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

Please quote approval reference number CLIN/03/51.

Yours sincerely,

A Jenvey

RP Kathryn Smith
Secretary to the Ethics Committee

Appendix D: Parent information sheet and consent form

Dear Parent/Guardian

Please would you grant permission for your child to take part in small study? The details of the study are outlined below. Please read the study details and sign the slip if you do not have any objections to your child taking part. I would be very grateful to parents who agree for their child to take part in the study. From the child's point of view, the task is fun to do.

Yours faithfully,

Jacqui Boyle

Remembering Situations

What is the study about?

I am interested in the way children remember different situations, such as talking in class, and whether remembering is linked with worry or feeling worried about being in situations with other people. Cartoons and fun pictures are used in the study and from the child's point of view, the tasks are fun to do.

Why has my child been invited to take part?

I am asking parents whose children are between 7 and 14 years old if I can include their child in this study.

What will my child have to do?

I will meet with your child for up to 40 minutes. I will ask your child to remember some everyday situations that most children have experienced. They will then be asked 5 easy questions about each memory. Finally, I will ask your child about his/her feelings using 3 questionnaires. The first questionnaire asks about sad and lonely feelings. The second questionnaire asks about worries. The last questionnaire asks about social worries. These are just to establish what mood the child is in. I have left copies of these questionnaires with the school receptionist so you can look at them if you wish.

I also need to have some idea of how much you think your child worries about social situations. Please agree to set aside a 10 minute period when I can ask you questions about your child over the telephone.

The project has full ethical approval and all information I collect about your child will be kept strictly confidential. After taking part, I will offer your child an information sheet about the study.

Please turn over

About your child's participation:

I cannot work with your child without your written consent. If you do not have any objections to your child taking part, then please fill out the consent form and return it to your child's school on Tuesday, 2 November 2004.

What will happen to the results of the study?

They will be used as part of my project for my doctoral qualification in clinical psychology and may be submitted for publication in scientific literature.

How can I know more about the study?

If you have any questions please contact me, Jacqui Boyle, by email at jrb302@soton.ac.uk or by telephone on 0789 0857 655 or 023 8059 5321 (please leave a message and your number so I can call you back).

Jacqui Boyle, Trainee Clinical Psychologist
Dated 9 October 2004

Remembering Situations: Reply Slip
Please return to your child's school on
Tuesday, 2 November 2004

My child can take part in the research project on remembering situations associated with the School of Psychology at the University of Southampton.

I understand that all information will remain confidential

Child's name: .....

Child's date of birth ..... Today's date.....

Your name .....

Your signature ..... Telephone number .....

I understand that if I have questions about my child's rights as a participant in this research, or if I feel that he/she have been placed at risk, I can contact the Chair of the Ethics Committee, Department of Psychology, University of Southampton, Southampton, SO17 1BJ.

Child information sheet and consent form

Consent Form

I am looking at the ways children and young people remember different kinds of everyday situations.

I need your help to do this project.

All you will have to do is remember some situations when I ask you to and then answer some questions about your memories of them.

It would also be helpful if you could answer some questions about the way that you feel too. There are no right or wrong answers to the questions.

Nobody else, except me, will see any of the answers that you give.

I will help you along the way.

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

Thank you very much.

.....

If you agree to help me, then please sign or write your name below:

Signature .....

Debriefing Sheet

What is the study about?
I wanted to know about the way young people remember things. I wanted to know if young people remembered different kinds of situations in different ways. I wondered whether some young people would see a picture of themselves in their mind when they remembered situations that involved doing things in front of other people, like talking in front of the class. Some people think that the way we remember things is linked to how much we feel worried about doing things in front of other people or with other people.

Learning about these things helps adults to understand more about why people feel worried when they have to do things in front of people, like talk in class and at parties.

Social anxiety
Some people get anxious when they have to do things in front of other people, like speaking in class, going to parties, eating in front of other people and talking to people. They might feel hot and go red and feel sweaty and some people feel shaky. This kind of fear is called social anxiety.

Getting help
If any of these things happen to you a lot and you want some help, show this paper to your mum, dad or teacher. You or your parents can go to your doctor. He or she can give you advice. You can also call ChildLine on 0800 1111 whenever you want to talk to someone.

Thank you for your help with this study

About your help with the study
Nobody else, except me, will see any of the answers that you gave.

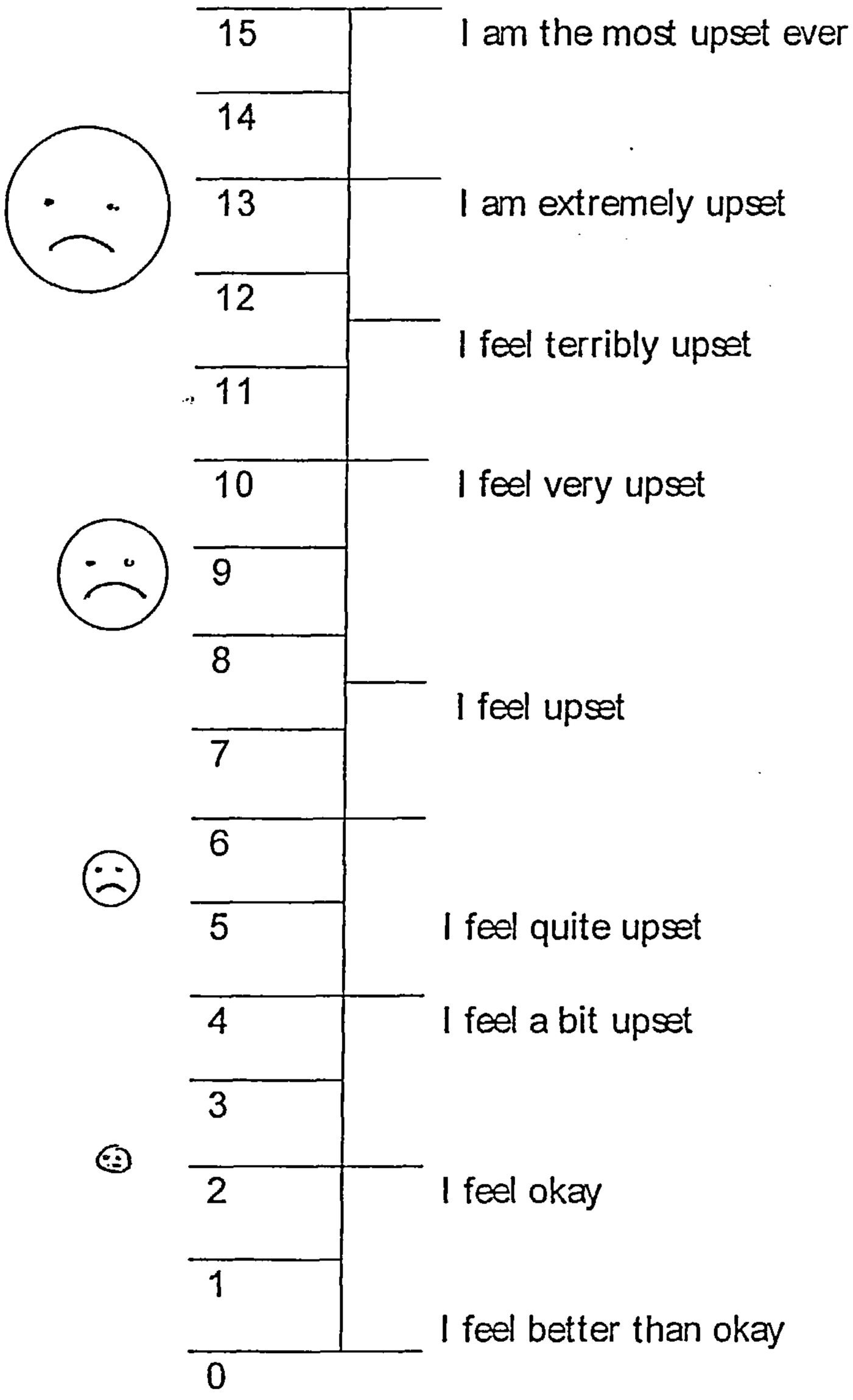
If you or your mum and dad have any questions about the study, or if you would like a summary of the study's results once the project is finished, please phone Jacqui Boyle on 0789 0857 655 or email me at jrb302@soton.ac.uk

If you have any questions about your or your child's rights in this study, or if you feel you or your child has been placed at risk, you may contact the Chair of the Ethics Committee, School of Psychology, University of Southampton, SO17 1BJ. Phone (023) 8059 3995.

Date: 05/07/04

Appendix E: Distress rating scale

Draw a line on the scale to show how upset you feel when you think about your memory now



Appendix F: Additional results tables

Table A1:

Correlations Between Scores on the Social Anxiety Scale for Children-Revised (SASC-R) and Social Anxiety Scale for Adolescents (SAS-A), the Revised Children's Manifest Anxiety Scale (RCMAS) and the Children's Depression Inventory – short form (CDI-S).

	1.	2.	3.	4.	5.
1. SASC-R/SAS-A	--	.853***	.676***	.627***	.566***
2. FNE		--	.755***	.633***	.567***
3. RCMAS			--	.801***	.559***
4. SCC				--	.559***
5. CDI					--

Note. FNE = Fear of Negative Evaluation Subscale on the SCAS-R or *SAS-A*. SCC = Social Concern/Concentration Subscale. OP = observer perspective

*** $p < .01$ (1-tailed).

Table A2

Correlation of Observer Perspective with Scores on the Revised Children's Manifest Anxiety Scale (RCMAS)

	1.	2.	3.	4.	5.
1. RCMAS	--	.78***	-.05	-.07	.02
2. SCC		--	-.06	-.06	-.01
3. All OP Memories			--	.76***	.60***
4. OP Social Memories				--	-.07
5. OP Physical Memories					--

Note. SCC = Social Concern/Concentration Subscale. OP = observer perspective

*** $p < .001$, two–tailed.

Table A3

Use of Observer Perspective and Scores on the Children's Depression Inventory – short form (CDI-S).

	1.	2.	3.	4.
1. CDI-S	--	.04	-.09	.17
2. All OP Memories		--	.76***	.60***
3. OP Social Memories			--	-.06
4. OP Physical Memories				--

Note. OP = observer perspective

***$p < .01$ (1-tailed).

Table A4

Correlation of Social Anxiety, Anxiety and Depression Measures with Memory Age

	1.	2.	3.	4.	5.	6.	7.	8.
1. SASC-R/SAS-A	--	.85***	.64***	.57***	.63***	.12	.04	.15
2. FNE		--	.73***	.58***	.58***	-.05	-.14	.05
3. RCMAS			--	.82***	.60***	.07	.14	-.03
4. SCC				--	.54***	.22	.25	.11
5. CDI-S					--	-.10	-.11	-.06
6. Age of All Memories						--	.82***	.84***
7. Age of SM							--	.37***
8. Age of PM								--

Note. SCC = Social Concern/Concentration Subscale. SM Social Memories. PM Physical Memories

*** $p < .001$, two–tailed.