Early Intervention of Anxiety in Preschoolers involving Social Skills Training and Parent Education

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Statement of Declaration

I declare that this thesis is a presentation of my original research work, and has not been

submitted for a higher degree to any other university or institution. Wherever

contributions of others are involved, every effort is made to indicate this clearly, with

due reference to the literature. The additional authors on the papers in chapter 2, 3 and 4

of this thesis were involved in the research at a supervisory level.

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This thesis is dedicated to the loving memory of my grandmother Kang Poay Hong.

Summary

Anxiety disorders are able to be diagnosed in children as young as 3 years of age. The primary aim of this thesis was to evaluate an early intervention program that targeted children at a high-risk of anxiety disorders. In order to determine key issues pertaining to prevention interventions, a detailed review of anxiety prevention programs was first presented in chapter 2. This review examined early intervention and prevention efforts targeted at specific types of anxiety such as PTSD and panic disorder, and also at those aimed at broader, non-specific forms of anxiety. Preliminary results have been encouraging, with universal and targeted prevention interventions showing some positive results. Several issues were identified and discussed in detail. These issues included favourable methods used for identifying at-risk participants, motivation for compliance with the prevention programs, optimal age for intervention as well as the expertise necessary for administration of the intervention.

Following the review, chapter 3 reported an early intervention program targeted at preschoolers with high risk factors for anxiety. This 6-session brief intervention program targeted core risk factors and combined parent-education with direct social skills training for the child. Seventy-two children aged 3 to 5 years were selected based on high behavioral inhibition levels and concurrently having a parent with high emotional negativity. Families were randomly assigned to either the combined intervention group or waitlist. After six months, families on the waitlist were offered a treatment consisting of the parent-education component only. Compared with the waitlist, children in the combined parent and child intervention showed significantly greater reduction on measures of anxiety disorders, symptoms, life interference and behavioral inhibition at the 6-month follow-up. These children maintained their gains at the 12-month follow-up. Quasi-experimental comparisons of the two active treatments

(combined Vs parent-only) showed that those who attended the combined intervention had slightly better outcomes. A comparison of effect sizes between the combined condition and previous parent-only interventions showed that the inclusion of a child component has the potential to increase the effects of the intervention.

Finally, chapter 4 examined the influence of parental overprotection as a moderator of treatment outcome and the role of overprotection as a mediator through which interventions achieve their effects. The data set used for this study was a combination of the cohort from chapter 3 and another data set from a previous early intervention (Kennedy, Rapee, & Edwards, 2009). Ninety-five children aged between 3 to 5 years, with known risks for anxiety such as high behavioral inhibition and parental anxiety received an intervention program. Changes in parental overprotection, clinician severity ratings of anxiety disorders and parent-reported anxiety symptoms were examined. The analyses were based on the 81 mothers and 64 fathers who returned questionnaires at the 6-month follow-up. Results reflected a negative relationship between baseline maternal overprotection and the outcome of treatment measured by clinician severity ratings, but a non-significant relationship when outcome was measured using maternal-reported anxiety symptoms. This suggests that maternal overprotection may only moderate some aspects of treatment outcome that is measured by clinicians. On the other hand, overprotection by fathers at baseline was not found to be associated with clinician ratings or paternal-reported symptoms. Finally, changes in both maternal and paternal overprotection were not found to be significantly associated with treatment outcome reported by either clinicians or parents, suggesting that the treatment did not achieve its effects through the alteration of parental overprotection.

CHAPTER 1

GENERAL INTRODUCTION

Etiology and risk factors of anxiety disorders

The lifetime prevalence of anxiety disorders is estimated to be 28.8%, with an early median age of onset of 11 years (Kessler et al., 2005). Despite the high prevalence of anxiety disorders in childhood, disproportionately little research has been directed at their aetiology. It has been suggested that the understanding of what causes anxiety disorders is impeded by their early onset and chronicity, making it difficult to ascertain a definitive point of onset (Rapee & Coplan, 2010). Anxiety disorders do occur in very young children and the anxiety symptoms they experience are consistent with the DSM-IV classification of anxiety disorders (Mian, Godoy, Briggs-Gowan, & Carter, 2012). Untreated, anxiety disorders can lead to significant compromises in psychosocial welfare such as reduced employment and social interaction, as well as increases in utilization of medical facilities, alcohol abuse and suicide (Norton et al., 1996; Roy-Byrne & Katon, 1997).

Behaviourally Inhibited Temperament

A behaviourally inhibited temperament is the tendency to be vigilant and to exhibit withdrawn behaviour when faced with novel situations, people, and objects in toddlerhood (Kagan, Reznick, Clarke, Snidman, & Garcia-Coll, 1984). Behaviourally inhibited children tend to respond to new situations with initial caution and low rates of approach, and with unfamiliar people, they tend to appear shy, reserved and reticent (Belsky, Rha, & Park, 2000). Behavioural inhibition (BI) has been widely studied and shown to be associated with increased risk for later anxiety disorders (Fox, Henderson, Marshall, Nichols, & Ghera, 2005; Hirshfeld-Becker et al., 2007; Hirshfeld-Becker et al., 2008; Mian, Wainwright, Briggs-Gowan, & Carter, 2011). Children with high BI also demonstrate extreme social withdrawal or reticence during preschool and later

childhood (Fox, Henderson, Rubin, Calkins, & Schmidt, 2001; Rubin, Burgess, & Hastings, 2002). Behavioural inhibition is also associated with a number of physiological indicators including increased autonomic reactivity, elevated cortisol levels, heightened startled responses, and more vigilant attentional styles (Pérez-Edgar & Fox, 2005; Schmidt & Fox, 1998; Schmidt, Fox, Schulkin, & Gold, 1999). Further, heightened amygdala activation to novel neutral or threatening faces is evidenced in functional imaging studies (Pérez-Edgar et al., 2007; Schwartz, Wright, Shin, Kagan, & Rauch, 2003).

The similarities between an inhibited temperament and anxiety disorders in children have given rise to differing opinions on the relationship between them. According to the 'spectrum' perspective, BI and anxiety reflect the same construct; they fall at different points along the same continuum, differing only in severity. The 'vulnerability' perspective, on the other hand, suggests that certain temperament types predispose or protect one from certain types of psychopathology in some contexts. In this case, this would suggest that BI predisposes one to developing anxiety, and that they are two related but separate constructs (Nigg, 2006). A recent review by Rapee and Coplan (2010) presents a persuasive argument for the distinction between BI and anxiety, by highlighting the presence of unique, non-overlapping characteristics of BI and anxiety, and only moderate correlation between the two. As two separate constructs, the relationship between BI and anxiety is complex and appears to be mediated by environmental factors such as parenting, childcare, and peer relationships. These environmental factors and temperament may be transactional in nature, where the child's temperament influences their environment, which in turn influences whether anxiety develops (Degnan, Almas, & Fox, 2010). Additionally, environmental factors

may moderate the effect of temperament on anxiety determining the strength and nature of these effects (Degnan et al., 2010).

Regardless of whether BI and anxiety are similar or separate constructs, the links between BI and anxiety are strong. Both retrospective studies and longitudinal studies have shown evidence of a moderate relationship between anxiety disorders and BI—suggesting that early BI is related to future anxiety disorders. Evidence from prospective studies has demonstrated that early BI is a risk factor for social anxiety and social wary behavior, rather than a risk factor for anxiety proneness more generally (Degnan et al., 2010; Hirshfeld-Becker et al., 2007; Hirshfeld-Becker et al., 2008; Rubin et al., 2002). Similarly, retrospective measures have reflected a relationship between current anxiety disorders and early BI. Young adults with social anxiety retrospectively reported greater childhood inhibition (Mick & Telch, 1998) and high school students with a current diagnosis of social phobia retrospectively reported greater social avoidance in elementary school (Hayward, Killen, Kraemer, & Taylor, 1998). Compared with controls, mothers of clinically anxious children retrospectively reported more difficulties in the first year of the child's life and more fears in the first two years of life (Rapee & Szollos, 2002). Further support from longitudinal studies has shown that high BI in early childhood is significantly associated with anxiety disorders in the future. More generally, long term follow-up of children from a young age have also demonstrated that children with stable BI are at a significantly elevated risk of later anxiety disorders (Hirshfeld et al., 1992; Rosenbaum et al., 1993). Clearly, BI at a very young age appears to be a relatively strong predictor of anxiety disorders in middle childhood and a reasonable predictor of adolescent anxiety (Rapee, 2002).

Parenting factors

Parental anxiety is a known risk factor for anxiety disorders. Studies have reported that the offspring of parents with an anxiety disorder, irrespective of comorbidity, show up to 3.91 times the rate of anxiety disorders compared with offspring of non-psychiatric parents (Micco et al., 2009). The reverse is also true in that parents of children with anxiety disorders show higher rates of anxiety disorders than parents of non-anxious children (Kashani & Orvaschel, 1990; Last, Hersen, Kazdin, Orvaschel, & Perrin, 1991).

There is now substantial evidence supporting the role of genetic factors in the development of anxiety disorders, and twin studies have estimated the heritability of anxiety to be approximately 30% to 45% (Ehringer, Rhee, Young, Corley, & Hewitt, 2006; Legrand, McGue, & Iacono, 1999). However, the variance accounted for by genetics alone does not fully explain the aggregation of anxiety disorders in families. It is postulated that aside from genetics, parental modelling of anxious behaviours and parenting styles play significant roles in the development of anxiety disorders in children (Hudson & Rapee, 2000). On the contrary, a meta-analysis by McLeod, Wood and Weisz (2007) suggests that parenting styles accounted for only about 4% of the variance in childhood anxiety, implying that parenting may in fact play a more minor role in the development of childhood anxiety disorders, than postulated by many other models and theories. Clearly, more work is required in this area to determine the amount of impact parenting factors may have on childhood anxiety. These findings would have a significant impact on determination of treatment components of childhood anxiety disorders.

Parental modelling of anxious behaviours has been suggested to be related to elevated anxiety levels in children (Grüner, Muris, & Merckelbach, 1999; Muris,

Meesters, Merckelbach, & Hülsenbeck, 2000; Whaley, Pinto, & Sigman, 1999), as fear is posited to be acquired through observational learning in early life. In support of this suggestion, maternal modelled fear has been found to result in persistent expressions of fear and avoidance of stimuli in toddlers (Gerull & Rapee, 2002). There is also evidence that social fears can be acquired through similar mechanisms, where maternal modelling of responses to a stranger determines the infants' subsequent expression of fear to the same stranger (de Rosnay, Cooper, Tsigaras, & Murray, 2006).

It has also been suggested that the mechanisms by which anxiety is transmitted to children may go beyond the basic "watch and learn" to include poor anxiety-regulation skills passed from parents to their children (Wood, McLeod, Sigman, Hwang, & Chu, 2003). Observational studies support this suggestion, showing that anxious mothers of clinically anxious children were more likely than control mothers of non-diagnosed children to discuss problems with their children in catastrophic terms that emphasize one's lack of control over the problem, or one's lack of ability to cope effectively with the problem (Whaley et al., 1999).

The two aspects of parenting style that have been widely studied in relation to anxiety disorders are parental rejection/acceptance and parental control (or more specifically, parental overprotection). The association between anxiety disorders and parental rejection/acceptance, as measured by child and parent report showed small or non-significant effects (Wood et al., 2003). Observational studies on the other hand showed significant correlations between parental rejecting behaviour and childhood anxiety. The inconsistency of results provides limited support for the suggestion that parental negativity or acceptance may be an important risk factor in the aetiology of childhood anxiety.

Parental overprotection on the other hand has stronger associations with anxiety. It is suggested that parental overprotection limits the child's development of autonomy and promotes dependence on parents, which in turn shapes the child's perception of their environment to be uncontrollable by themselves (Bögels & Brechman-Toussaint, 2006; Wood et al., 2003). This perception is posited to contribute to high levels of anxiety by creating the cognitive bias that negative events are out of one's control (Chorpita & Barlow, 1998). Two comprehensive reviews that assessed the relation between parental overprotection and child anxiety concur that there is sufficient evidence to accept the presence of a reliable relationship between parental overprotection and child anxiety (Rapee, 1997; Wood et al., 2003). However, a causal relationship is difficult to establish. A parent's overprotection, whether as a result of their own anxiety or not, may cause the child to become anxious (Edwards, Rapee, & Kennedy, 2010). But it could be true as well that the child's BI, anxiety or shyness elicits overprotection from their parents (Hudson, Doyle, & Gar, 2009; Rubin, Nelson, Hastings, & Asendorpf, 1999). Strong evidence from a longitudinal study by Edwards and colleagues (2010) reported that maternal overprotection not only predicted child anxiety but was also predicted by child anxiety. This finding supports a bi-directional model that has been suggested—overprotection and child anxiety affect each other in a mutually reinforcing manner, where overprotection exacerbates child anxiety, which in turn elicits overprotective behaviours (Hudson & Rapee, 2004; Rubin & Mills, 1991).

The bulk of evidence at present suggests that parenting factors are significantly associated with childhood anxiety. Thus, it may be important for treatment and early intervention programs to target these parental behaviours to reduce anxiety levels in the children and particularly to reduce risk for future anxiety disorders.

Negative life events

It has been proposed that negative life events contribute to the development of anxiety disorders by strengthening perceptions of a dangerous and unpredictable environment in which one has little control (Allen, Rapee, & Sandberg, 2008; Chorpita & Barlow, 1998; Edwards et al., 2010; Eley & Stevenson, 2000). A number of studies have shown elevated rates of stressful life events among anxious children (Bandelow et al., 2004; Phillips, Hammen, Brennan, Najman, & Bor, 2005; Spence, Najman, Bor, O'Callaghan, & Williams, 2002). Supporting this literature, Allen, Rapee and Sandberg (2008) recently showed that anxious children had experienced a significantly greater number of negative life events and adversities in the 12 months prior to the onset of their most recent clinical episode when compared to matched controls. In a longitudinal study, Edwards and colleagues (2010) found that negative life events predicted anxiety 12 months later among a community sample of 3-4 year-old children, strengthening the suggestion that negative life events are a risk for future anxiety.

Negative life experiences do not contribute to just a general vulnerability to any form of psychopathology. Early negative life experiences have been shown to be more predictive of anxiety than of depression (Phillips et al., 2005). More specifically, threat events, such as physical jeopardy and witness of trauma, more so than loss events, schoolwork stressors, family relationship problems or friendship problems, are strongly associated with anxiety (Eley & Stevenson, 2000).

Social skills

Anxiety and poor social skills impact each other in a vicious cycle, where poor social skills could be both a cause and a consequence of at least one major form of anxiety, namely social anxiety. It has been suggested that deficits in social skills may

lead to repeated unsuccessful interactions with others, and these unsuccessful interactions may in turn influence judgments about one's own social competence and social status among peers. This negative social experience results in a range of maladaptive cognitive processes and generates a sense of anxiety in future social encounters. From the reverse perspective, socially anxious individuals avoid social interactions and this likely limits opportunities for social skill development (Rapee & Spence, 2004).

Empirical evidence among clinically anxious children has been inconsistent as to whether those with social anxiety lack the necessary social skills, or whether they actually have the skills but fail to use them in socially challenging situations. Some research supports the claim of a skills deficit—children with social phobia have poorer social skills compared to their non-anxious peers, reported by both the child and parent and further supported by behavioural observations and performance on behavioural assessment tasks (Beidel, Turner, & Morris, 1999; Spence, Donovan, & Brechman-Toussaint, 1999). On the other hand, others have suggested that the reason for failure to successfully engage in social situations may be due not to a skills deficit but a performance deficit—the excessive anxiety experienced during social encounters inhibits the child from using their social skills (Kashdan & Herbert, 2001; Rapee & Spence, 2004).

Yet others have suggested that socially anxious children do not in fact perform any differently from non-anxious children in social situations; what differs is their perception of their own performance. Several studies have found that independent observers were unable to distinguish between low and high social anxiety groups in performance tasks yet children with higher levels of social anxiety tended to rate themselves as appearing more nervous. This low correlation between social anxiety

levels and observer-rated social skills scores (Cartwright-Hatton, Hodges, & Porter, 2003; Cartwright-Hatton, Tschernitz, & Gomersall, 2005; Miers, Blöte, Bokhorst, & Westenberg, 2009) suggests that socially anxious children do not exhibit poorer social performance but rather they believe that they look more nervous than they are observed to be.

Socially anxious children also endure more life interference than their non-anxious counterparts, demonstrate lower self-esteem, and experience more negative peer interactions and more peer exclusions (Gazelle & Druhen, 2009; Gazelle & Ladd, 2003; Ginsburg, La Greca, & Silverman, 1998). Specifically, the relationship between childhood social anxiety and lower peer acceptance has been shown to be mediated in part by social skills deficits (Kristensen & Torgersen, 2008). As such, remediation of social skills is likely to be important to protect these socially anxious children from further peer difficulties.

Social skills remediation interventions have been shown to be successful in enhancing the social skills targetted (e.g. Blonk & Prins, 1996; Christoff et al., 1985); however this does not necessarily entail a change in the child's social behaviours when interacting with peers. There is minimal evidence suggesting that newly acquired social skills are generalisable to real-life settings (Kendall & Morrison, 1984). Parental and peer participation are essential to promote generalisability of these new skills (Greco & Morris, 2001). As mentioned earlier, for at least some shy children, the problem may not be a deficit in social skills but rather a performance deficit. As such, social skills training that does not include anxiety-management strategies is unlikely to prove useful to these children since their anxiety would inhibit the use of their newly learnt social skills. Bögels & Voncken (2008) reported some success in social skills training on a specific subset of adults with social anxiety disorder—those with a fear of showing

bodily symptoms and experiencing interpersonal difficulties. Although effect sizes were large, the lack of a control group and the limited generalisability of results beyond this subset do not make for convincing evidence that social skills training alone is enough to make a significant impact on anxiety disorders. A recent study by Coplan and colleagues (2010), however, designed to assist inhibited preschool-aged children, demonstrated the efficacy of a social skills training intervention in significantly decreasing observed socially wary behaviours and increasing socially competent behaviours. Although the preliminary results are encouraging and give some support to social skills remediation programs being able to successfully promote positive social behaviours, the study's small sample size and short follow-up period must be taken into consideration.

Intervention programs for shy or anxious children that include both social skills training and aspects of cognitive behavioural therapy (CBT)—primarily exposure—have shown some positive effects. In one study involving preadolescent children with social phobia, significant improvements in social skills, reduced social anxiety and an increase in overall social functioning were reflected when compared to counterparts who did not receive the intervention (Beidel, Turner, Young, & Paulson, 2005). Similarly, Spence and colleagues (2000) found that children (aged 7-14) with social phobia who attended a social skills training and CBT intervention did better than the waitlist control, with significantly fewer retaining their diagnosis of social phobia and greater reduction in social and general anxiety. To my knowledge, there have been no studies that have measured the incremental benefits of a social skills training component beyond receiving CBT alone.

It should be noted that risk factors for anxiety disorders may be specific to one type of anxiety disorder or to anxiety disorders generally (Donovan & Spence, 2000).

Although the bulk of the literature examining the relationship between social skills and anxiety disorders has focused on social anxiety, there is also evidence that social difficulties is strongly predictive of later internalizing problems, not specific to social anxiety (Olson & Rosenblum, 1998). As such, social skills deficit remains an important risk factor that likely contributes to anxiety disorders.

In summary, the aetiology of anxiety disorders is complex and multi-faceted. Aside from a strong genetic component, risk factors such as a behaviourally inhibited temperament and having an anxious parent have been shown to significantly predict anxiety disorders later in the developmental pathway. As such, in any interventions aimed at anxiety in young children, these are important factors to consider. The influences of negative life events and of social skills are less well established, but emerging evidence suggests that they may be crucial in their contribution to anxiety disorders.

Aim and structure of thesis

This thesis aims primarily to add to the limited knowledge base of early intervention for very young children at risk of anxiety disorders. Growing evidence confirms the presence of anxiety disorders in very young children (Carter et al., 2010; Hirshfeld-Becker et al., 2010) and, more importantly, suggests a low likelihood of spontaneous recovery. Considering the chronicity of anxiety disorders and the high levels of interference for the individual and society at large, intervention at a young age becomes even more pertinent.

A detailed review of preventative interventions for anxiety disorders is the first task and is presented in Chapter 2. The literature on anxiety prevention has been increasing dramatically over the last few years, with prevention efforts being applied at

universal, selective and indicated levels. Some anxiety prevention efforts target specific types of anxiety such as panic disorder or post-traumatic stress disorder, whereas others target broader, non-specific anxiety. Key issues surrounding anxiety prevention such as motivation for treatment, optimal time for intervention and who should run the intervention are also discussed. This chapter has been published in 'Current Psychiatry Reports'. The published version is included as Appendix A.

Following the review of literature, the results of an early intervention program are presented. Previous early intervention programs involving only the education of parents have shown some significant but small effects. To try to increase the effects of prevention, the current intervention program addresses an additional risk factor: social skills deficits. A social skills training program (Coplan et al., 2010) will be run in conjunction with a parent-education program, "Cool Little Kids", designed for this study. The efficacy of this combined parent-education and child social skills training intervention at reducing anxiety, risk factors and associated life interference is reported in Chapter 3, with the treatment manual included as Appendix B.

Finally, in order to further increase the efficacy of treatment and prevention interventions for childhood anxiety, key influences on treatment outcome are examined. The role of parental overprotection, which has been shown to be closely linked with anxiety in childhood, is examined as a moderator and mediator of treatment outcomes and reported in Chapter 4.

References

- Allen, J., Rapee, R. M., & Sandberg, S. (2008). Severe life events and chronic adversities as antecedents to anxiety in children: A matched control study. *Journal of Abnormal Child Psychology*, 36(7), 1047-1056.
- Bandelow, B., Torrente, A. C., Wedekind, D., Broocks, A., Hajak, G., & Ruther, E. (2004). Early traumatic life events, parental rearing styles, family history of mental disorders, and birth risk factors in patients with social anxiety disorder. *European Archives of Psychiatry & Clinical Neuroscience*, 254(6), 397-405.
- Beidel, D. C., Turner, S. M., & Morris, T. L. (1999). Psychopathology of childhood social phobia. *Journal of the American Academy of Child & Adolescent Psychiatry*, 38, 643-650.
- Beidel, D. C., Turner, S. M., Young, B. J., & Paulson, A. (2005). Social effectiveness therapy for children: Three-year follow-up. *Journal of Consulting and Clinical Psychology*, 17, 721-725.
- Belsky, J., Rha, J. H., & Park, S. Y. (2000). Exploring reciprocal parent and child effects in the case of child inhibition in US and Korean samples. *International Journal of Behavioral Development*, 24(3), 338-347.
- Blonk, R. W. B., & Prins, P. J. M. (1996). Cognitive-behavioral group therapy for socially incompetent children: Short-term and maintenance. *Journal of Clinical Child Psychology*, 25(2), 215.
- Bögels, S. M., & Brechman-Toussaint, M. L. (2006). Family issues in child anxiety:

 Attachment, family functioning, parental rearing and beliefs. *Clinical Psychology Review*, 26(7), 834-856.

- Bögels, S. M., & Voncken, M. (2008). Social skills training versus cognitive therapy for social anxiety disorder characterized by fear of blushing, trembling, or sweating.

 *International Journal of Cognitive Therapy, 1, 138-150.
- Carter, A. S., Wagmiller, R. J., Gray, S. A. O., McCarthy, K. J., Horwitz, S. M., & Briggs-Gowan, M. J. (2010). Prevalence of DSM-IV Disorder in a Representative, Healthy Birth Cohort at School Entry: Sociodemographic Risks and Social Adaptation. *Journal of the American Academy of Child and Adolescent Psychiatry*, 49(7), 686-698.
- Cartwright-Hatton, S., Hodges, L., & Porter, J. (2003). Social anxiety in childhood: the relationship with self and observer rated social skills. *Journal of Child Psychology and Psychiatry*, 44(5), 737-742.
- Cartwright-Hatton, S., Tschernitz, N., & Gomersall, H. (2005). Social anxiety in children: social skills deficit, or cognitive distortion? *Behaviour Research and Therapy*, *43*(1), 131-141.
- Chorpita, B. F., & Barlow, D. H. (1998). The development of anxiety: The role of control in the early environment. *Psychological Bulletin*, *124*(1), 3-21.
- Christoff, K. A., Scott, W. O. N., Kelley, M. L., Schlundt, D., Baer, G., & Kelly, J. A. (1985). Social skills and social problem-solving training for shy young adolescents. *Behavior Therapy*, *16*(5), 468-477.
- Coplan, R. J., Schneider, B. H., Matheson, A., & Graham, A. (2010). 'Play skills' for shy children: Development of a Social Skills Facilitated Play early intervention program for extremely inhibited preschoolers. *Infant & Child Development*, 19(3), 223-237.

- de Rosnay, M., Cooper, P. J., Tsigaras, N., & Murray, L. (2006). Transmission of social anxiety from mother to infant: An experimental study using a social referencing paradigm. *Behaviour Research and Therapy*, 44(8), 1165-1175.
- Degnan, K. A., Almas, A. N., & Fox, N. A. (2010). Temperament and the environment in the etiology of childhood anxiety. *Journal of Child Psychology & Psychiatry*, 51(4), 497-517.
- Donovan, C. L., & Spence, S. H. (2000). Prevention of childhood anxiety disorders.

 *Clinical Psychology Review, 20(4), 509-531.
- Edwards, S. L., Rapee, R. M., & Kennedy, S. J. (2010). Prediction of anxiety symptoms in preschool-aged children: examination of maternal and paternal perspectives.

 **Journal of Child Psychology and Psychiatry, 51(3), 313-321.
- Ehringer, M., Rhee, S., Young, S., Corley, R., & Hewitt, J. (2006). Genetic and environmental contributions to common psychopathologies of childhood and adolescence: A study of twins and their siblings. *Journal of Abnormal Child Psychology*, 34(1), 1-17.
- Eley, T. C., & Stevenson, J. (2000). Specific life events and chronic experiences differentially associated with depression and anxiety in young twins. *Journal of Abnormal Child Psychology*, 28(4), 383-394.
- Fox, N. A., Henderson, H. A., Marshall, P. J., Nichols, K. E., & Ghera, M. M. (2005).

 Behavioural inhibition: Linking biology and behavior within a developmental framework. *Annual Review of Psychology*, 56(1), 235-262.
- Fox, N. A., Henderson, H. A., Rubin, K. H., Calkins, S. D., & Schmidt, L. A. (2001).
 Continuity and discontinuity of behavioral inhibition and exuberance:
 Psychophysiological and behavioral influences across the first four years of life.
 Child Development, 72(1), 1-21.

- Gazelle, H., & Druhen, M. (2009). Anxious solitude and peer exclusion predict social helplessness, upset affect, and vagal regulation in response to behavioral rejection by a friend. *Developmental Psychology*, 45, 1077-1096.
- Gazelle, H., & Ladd, G. W. (2003). Anxious solitude and peer exclusion: A diathesis–stress model of internalizing trajectories in childhood. *Child Development*, 74(1), 257-278.
- Gerull, F. C., & Rapee, R. M. (2002). Mother knows best: effects of maternal modelling on the acquisition of fear and avoidance behaviour in toddlers. *Behaviour Research and Therapy*, 40(3), 279-287.
- 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.
- Greco, L. A., & Morris, T. L. (2001). Treating childhood shyness and related behavior:

 Empirically evaluated approaches to promote positive social interactions.

 Clinical Child & Family Psychology Review, 4(4), 299-318.
- Grüner, K., Muris, P., & Merckelbach, H. (1999). The relationship between anxious rearing behaviours and anxiety disorders symptomatology in normal children.

 *Journal of Behavior Therapy and Experimental Psychiatry, 30(1), 27-35.
- Hayward, C., Killen, J., Kraemer, K., & Taylor, C. (1998). Linking self-reported childhood behavioral inhibition to adolescent social phobia. *Journal of the American Academy of Child and Adolescent Psychiatry*, 37, 1308-1316.
- Hirshfeld-Becker, D. R., Biederman, J., Henin, A., Faraone, S. V., Davis, S., Harrington,
 K., & Rosenbaum, J. F. (2007). Behavioral inhibition in preschool children at
 risk is a specific predictor of middle childhood social anxiety: A five-year
 follow-up. *Journal of Developmental & Behavioral Pediatrics*, 28(3), 225-233.

- Hirshfeld-Becker, D. R., Masek, B., Henin, A., Blakely, L. R., Pollock-Wurman, R., McQuade, J., . . . Biederman, J. (2010). Cognitive behavioral therapy for 4- to 7-year-old children with anxiety disorders: A randomized clinical trial. *Journal of Consulting and Clinical Psychology*, 78(4), 498-510.
- Hirshfeld-Becker, D. R., Micco, J., Henin, A., Bloomfield, A., Biederman, J., & Rosenbaum, J. (2008). Behavioral inhibition. *Depression and Anxiety*, 25(4), 357-367.
- Hirshfeld, D. R., Rosenbaum, J. F., Biederman, J., Bolduc, E. A., Faraone, S. V., Snidman, N., . . . Kagan, J. (1992). Stable behavioral inhibition and its association with anxiety disorder. *Journal of the American Academy of Child & Adolescent Psychiatry*, 31(1), 103-111.
- Hudson, J., Doyle, A. M., & Gar, N. (2009). Child and maternal influence on parenting behavior in clinically anxious children. *Journal of Clinical Child & Adolescent Psychology*, 38(2), 256-262.
- Hudson, J., & Rapee, R. M. (2000). The origins of social phobia. *Behavior Modification*, 24(1), 102-129.
- Hudson, J., & Rapee, R. M. (2004). From anxious temperament to disorder: An etiological model of generalized anxiety disorder. In R. G. Heimberg, C. L. Turk
 & D. S. Mennin (Eds.), Generalized Anxiety Disorder: Advances in Research and Practice. New York: Guilford Press.
- Kagan, J., Reznick, J. S., Clarke, C., Snidman, N., & Garcia-Coll, C. (1984). Behavioral inhibition to the unfamiliar. *Child Development*, 55(6), 2212-2225.
- Kashani, J. H., & Orvaschel, H. (1990). A community study of anxiety in children an adolescents. *American Journal of Psychiatry*, 147, 313-318.

- Kashdan, T. B., & Herbert, J. D. (2001). Social anxiety disorder in childhood and adolescence: Current status and future directions. *Clinical Child & Family Psychology Review*, 4(1), 37-61.
- Kendall, P. C., & Morrison, P. (1984). Integrating cognitive and behavioral procedures for the treatment of socially isolated children. In A. W. Myers & W. E.Criaghead (Eds.), *Cognitive behavior therapy with children* (pp. 261-288). New York: Plenum.
- Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62(6), 593-602.
- Kristensen, H., & Torgersen, S. (2008). Is social anxiety disorder in childhood associated with developmental deficit/delay? *European Child & Adolescent Psychiatry*, 17(2), 99-107.
- 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.
- Legrand, L. N., McGue, M., & Iacono, W. G. (1999). A twin study of state and trait anxiety in childhood and adolescence. *Journal of Child Psychology and Psychiatry*, 40(6), 953-958.
- McLeod, B. D., Wood, J. J., & Weisz, J. R. (2007). Examining the association between parenting and childhood anxiety: a meta-analysis. *Clinicial Psychology Review*, 27, 155-172.

- Mian, N. D., Godoy, L., Briggs-Gowan, M. J., & Carter, A. S. (2012). Patterns of anxiety symptoms in toddlers and preschool-age children: Evidence of early differentiation. *Journal of Anxiety Disorders*, 26(1), 102-110.
- Mian, N. D., Wainwright, L., Briggs-Gowan, M. J., & Carter, A. S. (2011). An ecological risk model for early childhood anxiety: The importance of early child symptoms and temperament. *Journal of Abnormal Child Psychology*, 39(4), 501-512.
- Micco, J. A., Henin, A., Mick, E., Kim, S., Hopkins, C. A., Biederman, J., & Hirshfeld-Becker, D. R. (2009). Anxiety and depressive disorders in offspring at high risk for anxiety: A meta-analysis. *Journal of Anxiety Disorders*, 23(8), 1158-1164.
- Mick, M. A., & Telch, M. J. (1998). Social anxiety and history of behavioral inhibition in young adults. *Journal of Anxiety Disorders*, 12, 1-20.
- Miers, A. C., Blöte, A. W., Bokhorst, C. L., & Westenberg, P. M. (2009). Negative self-evaluations and the relation to performance level in socially anxious children and adolescents. *Behaviour Research and Therapy*, 47(12), 1043-1049.
- Muris, P., Meesters, C., Merckelbach, H., & Hülsenbeck, P. (2000). Worry in children is related to perceived parental rearing and attachment. *Behaviour Research and Therapy*, 38(5), 487-497.
- Nigg, J. T. (2006). Temperament and developmental psychopathology. *Journal of Child Psychology and Psychiatry*, 47(3-4), 395-422.
- Norton, G. R., McLeod, L., Guertin, J., Hewitt, P. L., Walker, J. R., & Stein, M. B. (1996). Panic disorder or social phobia: which is worse? *Behaviour Research* and *Therapy*, 34(3), 273-276.

- Olson, S. L., & Rosenblum, K. (1998). Preschool antecedents of internalizing problems in children beginning school: The role of social maladaptation. *Early Education & Development*, 9(2), 117-129.
- Pérez-Edgar, K., & Fox, N. A. (2005). Temperament and anxiety disorders. *Child and Adolescent Psychiatric Clinics of North America*, 14, 681-706.
- Pérez-Edgar, K., Roberson-Nay, R., Hardin, M. G., Poeth, K., Guyer, A. E., Nelson, E. E., . . . Ernst, M. (2007). Attention alters neural responses to evocative faces in behaviorally inhibited adolescents. *NeuroImage*, *35*(4), 1538-1546.
- Phillips, N. K., Hammen, C. L., Brennan, P. A., Najman, J. M., & Bor, W. (2005).

 Early adversity and the prospective prediction of depressive and anxiety

 disorders in adolescents. *Journal of Abnormal Child Psychology*, 33(1), 13-24.
- 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. (2002). The development and modification of temperamental risk for anxiety disorders: prevention of a lifetime of anxiety? *Biological Psychiatry*, 52(10), 947-957.
- Rapee, R. M., & Coplan, R. (2010). Conceptual relations between anxiety disorders and fearful temperament. In H. Gazelle & K. H. Rubin (Eds.), *Social anxiety in childhood: Bridging developmental and clinical perspectives. New Directions for Child and Adolescent Development* (Vol. 127, pp. 17-31). San Francisco: Jossey-Bass.
- Rapee, R. M., & Spence, S. H. (2004). The etiology of social phobia: empirical evidence and an initial model. *Clinical Psychology Review*, 24(7), 737-767.
- Rapee, R. M., & Szollos, A. A. (2002). Developmental antecedents of clinical anxiety in childhood. *Behaviour Change*, *19*, 146-157.

- Rosenbaum, J. F., Biederman, J., Bolduc-Murphy, E. A., Faraone, S. V., Chaloff, J., Hirshfeld, D. R., & Kagan, J. (1993). Behavioral Inhibition in Childhood: A Risk Factor for Anxiety Disorders. *Harvard Review of Psychiatry*, 1(1), 2-16.
- Roy-Byrne, P. P., & Katon, W. (1997). Generalized anxiety disorder in primary care: the precursor/modifier pathway to increased health care utilization. *Journal of Clinical Psychiatry*, 58, 34-40.
- Rubin, K. H., Burgess, K. B., & Hastings, P. D. (2002). Stability and social-behavioral consequences of toddlers inhibited temperament and parenting behaviors. *Child Development*, 73(2), 483.
- Rubin, K. H., & Mills, R. S. L. (1991). Conceptualizing developmental pathways to internalizing disorders in childhood. *Canadian Journal of Behavioural Science*, 23, 300-317.
- Rubin, K. H., Nelson, L. J., Hastings, P., & Asendorpf, J. (1999). The transaction between parents' perceptions of their children's shyness and their parenting styles. *International Journal of Behavioral Development*, 23(4), 937-957.
- Schmidt, L. A., & Fox, N. A. (1998). Fear-potentiated startle responses in temperamentally different human infants. *Developmental Psychobiology*, 32(2), 113-120.
- Schmidt, L. A., Fox, N. A., Schulkin, J., & Gold, P. W. (1999). Behavioral and psychophysiological correlates of self-presentation in temperamentally shy children. *Developmental Psychobiology*, 35(2), 119-135.
- Schwartz, C. E., Wright, C. I., Shin, L. M., Kagan, J., & Rauch, S. L. (2003). Inhibited and uninhibited infants "grown up": Adult amygdalar response to novelty.

 Science, 300(5627), 1952-1953.

- Spence, S., Donovan, C., & Brechman-Toussaint, M. (1999). Social skills, social outcomes, and cognitive features of childhood social phobia. *Journal of Abnormal Child Psychology*, 108, 211-221.
- Spence, S., 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.
- Spence, S., Najman, J. M., Bor, W., O'Callaghan, M. J., & Williams, G. M. (2002).

 Maternal anxiety and depression, poverty and marital relationship factors during early childhood as predictors of anxiety and depressive symptoms in adolescence. *Journal of Child Psychology and Psychiatry*, 43(4), 457-469.
- Whaley, S. E., Pinto, A., & Sigman, M. (1999). Characterizing interactions between anxious mothers and their children. *Journal of Consulting and Clinical Psychology*, 67, 826–836.
- Wood, J. J., McLeod, B. D., Sigman, M., Hwang, W.-C., & Chu, B. C. (2003).
 Parenting and childhood anxiety: theory, empirical findings, and future directions. *Journal of Child Psychology and Psychiatry*, 44(1), 134-151.

CHAPTER 2

PREVENTION OF ANXIETY DISORDERS

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Abstract

Research in the prevention of anxiety has increased dramatically in the last few years. Prevention programs have been variously directed at either broad, non-specific anxiety and at more specific anxiety types such as panic disorder and posttraumatic stress disorder. Prevention of anxiety is still a relatively new field but there has been a recent surge of literature reporting different prevention programs. Universal prevention trials have shown small but promising results and school-based programs which are offered to all students also help to reduce stigmatization and common barriers to accessing treatment (e.g. time, location and cost). In contrast, targeted programs tend to show somewhat larger effects but rely on identification of relevant populations. Specific programs for the prevention of panic disorder and PTSD have also shown some preliminary success. This paper reviews the recent studies of prevention of anxiety and discusses several key issues, specifically (a) identification of at-risk participants for prevention programs; (b) motivation for participation; (c) optimal age for intervention; and (d) who should deliver the program.

Introduction

Anxiety disorders are highly prevalent, chronic conditions that result in significant impairment on functioning and quality of life [1, 2]. Anxiety disorders onset typically in childhood or early adolescence [1] and both retrospective and prospective studies indicate that they show limited remission over time [3]. Anxiety disorders also predict the onset of other anxiety disorders, depression and substance use disorders [4, 5]. When left untreated, anxiety disorders lead to reduced employment and social interaction, and increases in medical utilization, alcohol abuse, and suicide [6, 7] and are associated with poor long term outcomes in social, academic and career domains [8, 9]. In turn, these sources of impairment result in significant economic cost [10]. Despite the marked social and personal impact of anxiety, the majority of people with anxiety disorders will not receive clinical intervention [11, 12].

The need for prevention and early intervention

Some of the known risk factors for anxiety disorders, such as an inhibited temperament, negative attitudinal styles and poor coping skills [13, 14], often are features of the disorder and may already be interfering in the individual's functioning. Thus, a large proportion of children selected on the basis of risk for anxiety already meet criteria for an anxiety disorder [15, 16]. This suggests that early intervention is important not only in prevention of future anxiety disorders, but also in relief from current interfering symptoms. Further, considerations of cost-effectiveness indicate that treatment alone is not sufficient to avert the disease burden imposed by anxiety disorders [17], thereby providing additional support for the notion of early intervention and prevention.

Classification of prevention

As the components of prevention programs capitalize heavily on empirically sound treatments of anxiety disorders [18], in reality, the distinction between prevention and treatment reflects the point at which the intervention is administered. As such, treatment of disorder at one developmental point could be conceptualized as prevention of disorder further along the developmental stream [19]. The demarcation between prevention and treatment is grey and lies along a continuum [20]. Reflecting increased understanding of the complexities surrounding the development of mental disorders, the Committee on Prevention of Mental Disorders proposed a classification system for disease prevention [21] which refers to a continuum of interventions with universal prevention at one end to after-care at the other end [19]. The prevention end of the spectrum was based on the individual's risk of developing a disease weighed against the cost and risk for the intervention. This new system consisted of three main forms of early intervention: universal, selective and indicated and is now widely accepted in the prevention literature.

Universal interventions are applied to the entire population regardless of their risk status. The advantages of universal interventions include avoiding the need for screening and reduced stigmatisation. Selective interventions are applied to individuals at known risk for the illness/ disorder while indicated interventions select participants who are already displaying mild symptoms. Therefore selective and indicated interventions necessarily require greater investment of resources for selection and increase the risk for stigma. However, the preventive intervention is subsequently aimed at a more focused population, allowing more targeted resource expenditure [22].

Prevention of non-specific anxiety

Universal preventions:

The bulk of the universal intervention literature targeting child anxiety has been dominated by studies of the FRIENDS program e.g. [23-26] (See [27] for review of this program). This program originated from Kendall's Coping Cat Program clinical treatment program for anxious children [28] and is available in two versions—

FRIENDS for Children 7-11 years and FRIENDS for Youth 12-16 years. The program involves 10 in-school sessions for the child/adolescent, 2 booster sessions, 0-4 parent sessions (depending on the study) and involves homework between sessions for the children. The program adopts a cognitive behavioural treatment approach and comprises psychoeducation, relaxation, positive self-talk, graduated exposure, problem solving and rewards [23].

Across studies, outcome from FRIENDS typically indicates a significant decrease in anxiety symptoms in both the intervention and wait-list control group, with the intervention group tending to show significantly lower anxiety scores when compared to the waitlist group [24, 26, 29], indicating the efficacy of the FRIENDS program as a universal prevention intervention.

External evaluation of this program however, has not been as consistent. In a recent Canadian study 253 children were randomly allocated to either the FRIENDS treatment group, or to an attention control group (where the children were read the first Harry Potter novel) [30]. Children in the attention control condition demonstrated reductions in anxiety that were as great as those in the intervention condition. In an uncontrolled universal trial in the UK [31, 32], reduction of anxiety and increase in self-esteem were found at the 3 and 12 month follow up only when compared with an

assessment conducted 6 months prior to the intervention but not with an assessment just before the intervention. Considering the general trend for improvement over time often noted in children who do not receive intervention [33], these small changes are surprising. It is unclear why the independent studies have shown smaller effects than the studies by the originators. Lyneham and Rapee [34] suggest that factors such as more experience and allegiance among the originators may lead to stronger effects. This may point to the need for more intensive training for staff running programs such as FRIENDS. The use of an active control condition in the study by Miller et al. also provides a more stringent test and addresses more than a simple question of efficacy.

Another universal prevention study by Dadds and Roth [35] examined the effects of a brief anxiety prevention program, REACH for RESILIENCE for preschool children aged 3 to 6 years. The intervention consisted of six sessions for parents focusing on building positive expectations and social competency in children. Unfortunately, opt out rates were high in the intervention group resulting in self selection of families into the program. Further, stressed parents in the intervention group were most likely to attend the program, while stressed parents in the waitlist condition tended to opt out. Attendance rate for the program was also poor, with only 33.8% of parents attending between 4 to 6 sessions, making analyses of the results very difficult. These are common difficulties faced when implementing a universal prevention intervention, where participants with no or low interference from the disorder show low levels of motivation and compliance. When controlling for preintervention differences, parents reported no significant change in their children while the teachers disagreed and generally tended to view all children as becoming better adjusted over time, with relatively greater improvements on anxiety problems at posttreatment, when compared to the waitlist group. When grouped according to preintervention risk status, a higher percentage of the treatment group moved from at-risk to low-risk status.

Another more recent study by Aune and Stiles [36] implemented a universal preventive program, Norwegian Universal Preventive Program for Social anxiety (NUPP-SA) in two counties in Norway. Participants were cluster randomized to either the NUPP-SA intervention condition or a control condition. Components of the NUPP-SA intervention included psychoeducation, fighting cognitive distortion, realistic thinking and also requiring the participants to write an essay on an aspect of social anxiety. The results reflected that NUPP-SA had a significant specific intervention effect for reducing social anxiety in the total sample as well as among the participants who had met criteria for social phobia at pre-intervention. Importantly, significantly fewer participants from the intervention county developed clinically significant social anxiety during the 1-year period, thus showing a prevention effect.

Universal prevention programs to date have shown mixed results on symptoms of anxiety, with around half producing small but significant differences, while the remainder have failed to show statistically significant effects [37]. Universal prevention studies have also shown mixed results in the ability to alter the risk status of participants. While some studies demonstrate a greater reduction in the number of children at risk in the intervention group compared with the control group [24, 33, 35, 36], others have found a general improvement in risk status, from at-risk to healthy, regardless of assigned condition [25, 29]. The nature of universal interventions means that even small effects can be viewed as important. A small effect applied across an entire population translates into large numbers of averted disorder. Therefore the results from universal interventions for anxiety are promising. However, the costs of these programs are likely to be large and well-controlled cost-effectiveness studies have not

been conducted. Future developments and methodological refinements will hopefully result in more consistent outcomes from research. It will be particularly important to identify some of the reasons for the lack of effects in some studies to provide better guidelines for future implementation.

Selective interventions:

A smaller number of studies have recently begun to evaluate the value of selective prevention interventions for anxiety. Rapee and colleagues [15] reported the efficacy of an early intervention program which was aimed at preventing the development of anxiety in preschool children. Children were recruited on the basis of high level of withdrawn/inhibited behaviours, one of the most clearly established risk factors for the development of anxiety [38]. The intervention was designed to be brief to allow a realistic and cost-effective program and comprised 6 group sessions of parent education which covered parenting skills, cognitive restructuring and in vivo exposure. Children whose parents were allocated to the education condition showed a significantly greater decrease in anxiety diagnoses at 12 months relative to those whose parents received no intervention. This change however, was not reflected on measures of temperamental inhibition/withdrawal. The results exhibit the value of a very brief early intervention for anxiety disorders, although the effects do not appear to be mediated through alteration of temperament. A 24 and 36 month follow up found that at-risk children whose parents had received the education program were significantly less likely to display anxiety disorders or report symptoms of anxiety than similar children in the monitoring condition [39]. These data constitute the first evidence that it is possible to produce lasting changes in children's anxiety symptoms after a simple intervention early in the child's life.

On the basis of these results, Kennedy, Rapee and Edwards [16] conducted another selective intervention program for preschool children who were selected on the basis of dual risk: high levels of inhibition combined with a parent with a current anxiety disorder. Due to the high levels of risk that the children were selected on, all of them met criteria for one or more anxiety disorders at baseline. At 6-month follow-up, the children in the intervention group showed a significantly greater reduction in anxiety disorders and less interference from their anxiety than the waitlist group. Contrary to the previous study, children in the intervention condition also showed greater reductions in behavioural inhibition, reflected both on parent report and laboratory observation. These results suggest that a brief early intervention delivered through parents can reduce current anxiety and associated risk and may have the potential to alter the developmental trajectory of anxiety in an especially high-risk group of preschool aged children.

In a study with older children aged 7 to 12 years whose parents met criteria for an anxiety disorder, participants were randomly assigned to an 8-week cognitive behavioural intervention, Coping and Promoting Strength program (CAPS) or a waitlist control condition [40]. At 1-year follow-up, 30% of children in the waitlist group developed an anxiety disorder compared to none in the CAPS group. Independent evaluators and parent-report (but not children's reports) showed that levels of anxiety significantly decreased from pre-intervention to the 1-year follow up assessment in the CAPS group but not in the waitlist group. The results suggest that selective interventions also can be successfully aimed at school-aged children.

Most recently, Balle and Tortella-Feliu [41] evaluated a brief school-based selective prevention program in Spain, aimed at reducing anxiety sensitivity as well as anxious and depressive symptoms in individuals aged 11 to 17. Selection was based on

high levels of anxiety sensitivity and the absence of any current mental disorder. Participants were randomly allocated to either the prevention group or waitlist control. Students in the prevention group were offered six 45- minute group sessions that included psychoeducation, emotional regulation techniques and gradual exposure. Significant decreases in anxiety sensitivity and anxious and depressive symptoms were observed in both the prevention and waitlist control groups immediately post-treatment. However, by the 6 month follow-up, participants in the prevention group showed a significantly greater decrease than those on waitlist on the measure of anxiety sensitivity and in fact their level of anxiety sensitivity was not significantly different from a normal comparison group. There was also a trend for participants on waitlist to show a slight increase in symptoms of anxiety and depression by 6 month follow-up, which was not reflected in the prevention group, although this difference did not reach significance.

Hence selective interventions appear to show considerable potential to alleviate current anxiety as well as to reduce the development of future anxiety disorders.

Interestingly, results have been mixed with respect to reduction of risk for anxiety disorders with two studies showing significant reduction [16, 41] but others failing to demonstrate significant effects on underlying risk [15, 39].

Indicated interventions:

As described, indicated interventions target children who are showing low-level symptoms of the relevant disorder. Naturally one of the most difficult issues with such an approach is how to best identify relevant children. There is no perfect method and each method of identification is associated with its own limitations. Many studies simply select children who score above a threshold on measures of anxious symptoms.

The key limitations of this method include: lack of knowledge about whether the anxiety reflects "pathology" or a normal reaction to real threats in the environment, a possibility for children to under- or over-report symptoms based on various motivations, and the potential for anxiety symptoms to be secondary to a more pressing comorbid problem.

Dadds and colleagues [42, 43] conducted a school-based indicated prevention program with students aged 7-14 years. Participants were first selected either if their teacher had nominated them as anxious but not disruptive or if they scored high on a measure of anxiety symptoms. Parents of selected students were required to report their child's anxiety in a diagnostic interview and children who had subclinical or mild clinical anxiety disorder were accepted into the study. Although no significant group differences were found immediately post treatment, group differences were significant at the 6-month follow-up. The two groups converged again at the 12-month follow-up, but at the two-year follow-up, children with more severe anxiety at baseline showed the largest group differences in anxiety disorder rates (i.e., a treatment effect). When looking specifically at the group of children who did not have an anxiety disorder at baseline, group differences were shown at the 6-month follow-up, but were not maintained at the two-year follow-up. Hence any true prevention effects of the intervention appeared to be short-lived.

Using similar selection procedures Bernstein, Bernat, Victor, & Layne [44, 45] selected children (aged 7 to 11) who either met DSM-IV criteria for an anxiety disorder (75%) or were subthreshold for an anxiety disorder (25%). Schools were randomly allocated to one of three conditions: group Cognitive Behavioural Therapy (CBT) for children, group CBT for children plus parent training, or no treatment control group. The child group CBT followed the manual-based FRIENDS program while the group

CBT plus parent training, involved parents in a concurrent 9-week parent training program which consisted of parental anxiety and stress management, behavioural contracting, and clarification of the impact of child anxiety on family functioning. No significant differences were found between the three groups on remission of baseline anxiety disorders or incidence of new anxiety disorders at the follow-up. However, when the two CBT groups were collapsed (to increase power) and compared to the control, significant improvement in anxiety severity and impairment across a 12-month period was observed. Further, several parent-report measures at 3 and 6 months posttreatment suggested that group CBT for children plus parent training provided additional benefit over the group CBT for children when each was compared to the control group. Thus, further research is necessary to weigh the costs and benefits of the inclusion of parents in such intervention programs.

A recent replication of the indicated prevention by Dadds et al. [43], aimed to assess whether the intervention could produce similar outcomes when conducted by school counsellors and teachers [46]. No significant differences between the intervention and the waitlist were found at 2 year and 4 year follow-up. The authors suggest that the lack of difference between groups could be due to general maturational effects, minimal parental involvement, older age of the current sample or more importantly, the use of school counsellors and teachers rather than more highly qualified clinicians with a CBT background.

The above mentioned studies have retained a waitlist control through to at least the 12-month follow-up and this design not only allows for investigation of the long term gains of the intervention, but also acts as a control for factors such as passage of time and the natural progression of anxiety in children. Two additional studies have utilised shorter time frames.

A recent study adopted an indicated prevention approach using the FRIENDS program in a Scottish setting [47]. It appears that the groups did not show significantly different effects. However, separate group analyses showed a small but not significant reduction in anxiety symptoms in the waitlist group but a significant reduction in anxiety in the intervention group.

Finally Mifsud and Rapee [48], evaluated a school-based early intervention program for the reduction of anxious symptoms in at-risk children from low socioeconomic status neighbourhoods. The intervention was based on a clinical treatment program for child anxiety, Cool Kids. Children received 8 group sessions in school and this was supplemented with two information evenings for their parents. Groups were co-facilitated by a school counsellor and a qualified mental health practitioner. Children assigned to the active intervention demonstrated a significant reduction in symptoms of anxiety relative to the children assigned to waitlist and differences were maintained 4 months after treatment according to both self- and teacher- report.

In general, the results from indicated interventions have shown mixed results. Few studies have teased apart treatment effects (reduction in anxiety disorders) from pure prevention effects (reduction of the number of participants that move from subclinical to clinical range) and the effects of true prevention have been difficult to demonstrate. However, this may not be an especially important issue given the continuum between prevention and treatment [20] and the difficulty demonstrating prevention may be largely to do with lack of power. However, even overall outcomes in these studies have been inconsistent and may have much to do with the ways in which participants are selected and the training of the therapists. These issues are discussed in more detail below.

Prevention of specific anxiety disorders

Prevention of Panic disorder:

Panic disorder has a later onset than most other anxiety disorders, with a mean age of onset between 25 to 29 [49]. In many ways, this makes it an ideal candidate for prevention, yet surprisingly few studies have evaluated prevention of this disorder to date. Empirically demonstrated risk for panic disorder is conferred by previous panic attacks [50] and anxiety sensitivity [50-52]. Based on these findings, Gardenswartz and Craske [53] conducted an indicated prevention program for university students at risk for the development of panic disorder. Students who experienced at least 1 panic attack in the last 12 months and at least moderate anxiety sensitivity but did not currently meet criteria for panic disorder were randomly allocated to either a one day workshop or to a waitlist condition. The 5-hour workshop consisted of psychoeducation, cognitive and behavioural strategies, education about agoraphobia, interoceptive exposure and in vivo exposure. All participants, regardless of assigned condition, rated their panic and anxiety each month for 6 months. As a group, participants who received the workshop were significantly less likely to go on to develop panic disorder (1.8%) when compared to participants in the waitlist group (13.6%) demonstrating a clear prevention effect.

Interestingly, however, there were weaker effects on the relevant risk factors. When taking into consideration both frequency and intensity of panic attacks, participants who participated in the workshop showed a slightly larger decrease than those on waitlist, but this difference failed to reach significance. Similar effects were shown on the Anxiety Sensitivity Index. It is interesting to note the ability to achieve significant prevention of panic disorder in the absence of significant effects on key risk factors. As described earlier, similar results have been shown following indicated programs for young children at risk for anxiety where significant reductions in anxiety

disorders were demonstrated in the absence of a significant group difference on inhibition [15]. These results point to the potential for prevention even when key risk factors are not demonstrably altered. In contrast, some studies have shown success in altering both anxiety sensitivity and behavioural inhibition [16, 41]. Reasons for these differences are not clear but may include methods of assessing risk, sample size of the studies, age of participants, or focus of the intervention. Clearly, considerably more research is needed to determine the mechanisms by which these prevention interventions are achieving their effects.

Prevention of PTSD

Early attempts to apply prevention and early intervention programs in the field of PTSD were focussed on adult women who were victims of sexual assault. These studies showed minimal success at reducing the incidence of PTSD [54] and it is possible that the variability in outcome depended on variation in method of intervention and number of sessions (See [55, 56] for detailed review of PTSD prevention programs). Furthermore, many of these early programs did not include baseline measures of PTSD, making it impossible to differentiate between prevention and treatment effects.

More recently, Berger, Pat-Horenczyk, and Gelkopf [57] evaluated a school-based intervention at a school in Hadera, Israel, which was subject to repeated actual and potential trauma, placing the children at continued risk for PTSD. The selective intervention, "Overshadowing the Threat of Terrorism" (OTT), was implemented as part of the school curriculum and aimed at reducing posttraumatic stress-related symptoms, somatic complains, functional impairment, and anxiety due to exposure to terrorism in students from 2nd to 6th grade. Students were randomly assigned to the eight-session structured program or to a wait list control group. Two months post-

Intervention, the intervention group reported significant improvements on all measures. None of the children assigned to OTT showed significant symptomatic worsening and none of the six children who initially met criteria for PTSD continued to meet criteria at posttest, demonstrating both prevention and treatment effects. Conversely, in the control group, 2 of the 67 children who did not report symptom criteria at baseline, went on to meet criteria for PTSD after 2 months and 3 out of 5 children who originally met criteria for PTSD remained diagnostic at posttest. A major drawback of the study is the short follow-up period of 2 months which fails to show that effects can be maintained over time.

In a later study, Gelkopf and Berger [58] conducted another prevention intervention in an all-male religious public secondary school in Beer Sheba, a city in Israel where several terror attacks occurred since 2000. Students were allocated to either the intervention group or the waitlist group by class randomization. The ERASE-Stress program, which was offered to the intervention group, incorporated psychoeducation, skills training with meditative practices and narrative techniques to re-process traumatic experiences. Results showed that at three months post intervention, PTSD severity, functional problems, somatic complaints and depression scores were significantly reduced in the intervention group, when compared to the waitlist group. Both the studies supported the notion that such early intervention and prevention programs can reduce PTSD related symptoms and the incidence of PTSD amongst children who are repeatedly exposed to terrorist attacks. This sets the ground work for the possible implementation of early intervention programs in schools where children are at significant risk of high levels of threat.

Key issues surrounding prevention of anxiety

Identification of children for prevention programs

Selective and indicated preventions both rely on sensitive and specific methods to identify children at risk of anxiety in a cost-effective manner. Assessment of anxiety for clinical purposes typically involves the use of multi-method, multi-informant approaches [59, 60]. Thus, ideal assessment of risk requires information from the child, parents, and teachers and also from direct observations. Clinical interviews have been included during the screening process in some studies (e.g. [16, 43, 44]) but these are generally used for research purposes to determine prevention effects. When translating prevention programs from research to community application, full clinical assessments would generally be considered excessively costly and unnecessary.

There is also evidence that prevention efforts will show larger effects when the child's risk status is higher. Starting with a preschool cohort, Ashford and colleagues [61] demonstrated that a markedly greater proportion developed high anxiety at age 11 when they initially evidenced multiple risk factors (48%) than those who were initially high on only a single risk factor (15%). In line with this finding, Kennedy et al. [16] showed stronger prevention effects when targeting children scoring high on two risk factors (an anxious parent and behavioural inhibition), when compared with the study by Rapee et al. [15], where children were selected only based on a single risk factor (behavioural inhibition). The degree of risk the child is selected on may also have an impact on whether the intervention is able to alter the underlying risk factor. Therefore it is critical for optimal effects for targeted prevention programs to select participants on the basis of as many risk factors as practical.

Identification of appropriate children for indicated interventions is also a complex issue and there is no ideal method. All forms of assessment will be associated

with their own errors and biases. For example, selecting children on the basis of parent nomination will have the advantage that parents will be insightful and motivated, but will have the disadvantages that they may miss many internalising symptoms, may lack knowledge of anxiety, and may be influenced by their own needs and motivations. On the other hand, identification through children's self reports will allow greater access to internal processes, but relies on insight from (sometimes young) children, and may be affected by perceived stigma or desire to miss classes. Further, identification based on simple symptom counts ignores the fact that anxious symptoms are often comorbid with other problems that might interfere with optimal response to an anxiety program. To date, little research has focussed on determining the best methods of selection and this is an important direction for future investigation.

Motivation

Motivation to participate in an intervention is often commensurate with the amount of interference and distress the participant is experiencing. As such, motivation, attendance and compliance are generally highest in indicated and selective interventions and are lower for universal programs [22]. Dozois [62] makes an interesting point that prevention programs should not assume that participants are ready for change and that material should be included in programs to target motivation. Parental motivation is particularly important when prevention is aimed at children as denial of consent excludes children from any contact with the program. Parental beliefs, especially the belief that the child will "grow out of it", often interfere with active participation. One complicating fact is that on an individual basis a belief such as "my child will grow out of it" has a relatively high likelihood of being correct since the majority of children high in anxiety at one time will improve over time [63]. However, parents need to

understand that certain risk factors expose their child to a much higher likelihood of developing an anxiety disorder and thus engagement in a prevention program before the onset of an anxiety disorder could have long term benefits on the child's life. As parental anxiety is a commonly used risk factor for identification of at risk children (e.g. [16, 40]), some time could be dedicated to discussing with parents what the interference of their own anxiety is on their lives and to educate parents that active participation reduces the chances of the child experiencing similar difficulties. Psychoeducation on broader negative outcomes such as adolescent depression and drug use should also be elaborated on. It may also be worthwhile mentioning that even though child anxiety treatments have shown good success [38, 64], the earlier the intervention, the briefer the impact of symptoms on the child's life.

Optimal age for intervention:

Another pertinent issue for anxiety prevention is the age at which the intervention should occur. Early onset of most anxiety disorders pressures prevention programs to intervene early. Hirshfield-Becker and Biederman [64] make a strong argument for prevention of anxiety to be most optimal during the preschool years due to the plasticity of the child's development. Kennedy et al. [16] recruited preschool children based on high risk factors and found that all children in the study had already met criteria for an anxiety disorder. This suggests that anxiety may already interfere with life from a very young age and thus intervention at preschool age is not too early. This interference could be explicitly pointed out to parents as a way of motivating them to be committed in helping their child overcome their anxieties, even at a young age of 2 or 3 years. Of course, intervention in school-aged children also clearly has its benefits. Children at that age are able to benefit from cognitive aspects of the prevention program.

Cognitive skills that are taught may continue to be used in later life as they cope with the stressors that come their way. In two of the only studies comparing prevention at two different developmental stages [25, 29] younger children (aged 9 -10) reported greater improvements in anxiety symptoms than did older participants (aged 14-16) at post intervention. Results were less consistent at 12 month follow up, with one study [25] showing that the younger group continued to show more improvement than the older group, while the other study [29] demonstrated little difference between groups after 12 months. Clinically, there is little doubt that engaging adolescents in interventions is not easy, but it is possible that utilising more age-appropriate methods might reduce any such age differences (e.g. [65]).

Another advantage for prevention during middle childhood and adolescence is the ease of access to a broad cross-section of children through the school system [66]. However, in contrast to this view, some authors have pointed out that schools are typically extremely stretched in terms of resources and may find it difficult to include mental health prevention into their standard mandate [19, 67]. Thus schools provide an ideal venue for prevention only if the system is able to provide sufficient resources.

Who should deliver the program?

The costs of running such prevention interventions hinge heavily on who delivers the program. In one study, the originators of the FRIENDS program compared psychologist-led to teacher-led intervention and found no significant differences [23]. However, independent researchers have failed to replicate the success of the FRIENDS program when utilizing school counsellors, teachers and nurses [32, 46]. Work in the depression prevention literature suggests that teacher-led programs appear to produce weaker results when compared to programs led by mental health professionals [68]. It is

likely that many additional factors may interact with the actual qualifications of therapists to determine outcomes and the issue is likely to be a very complex one. For example, teachers may view a mental health program as "secondary" to their main goals of education. Therefore, teachers may be highly successful at conducting such programs if given sufficient support to first complete their other aims. Similarly, the extent of structure in the program may influence the success of less trained staff. Clearly, these are important issues to explore since the qualification and training of required staff will influence the costs and accessibility of programs.

Conclusion

With the support of cost-effectiveness studies, it is becoming an increasingly accepted view that psychological intervention to prevent the development of anxiety disorders can play a key role in reducing the disease burden associated with mental health. As such, there has been a recent surge of research into the prevention of anxiety. Preliminary results have been encouraging, with universal and targeted (selective and indicated) prevention interventions showing some positive results. Continued research is still necessary in many areas. Research is required to better understand the risk for anxiety given that prevention programs are likely to achieve better effects when participants are selected based on several risk factors. Following from this, research also needs to identify the best combination of screening tools to identify the most appropriate targets for indicated and selective programs. Additional value would be obtained by research to determine the relative costs and benefits of conducting programs using highly trained and qualified staff versus more generic mental health or educational personnel. Finally, the mechanisms by which prevention interventions are achieving their effects are still unclear and further knowledge in this area would inform program content.

References

- Kessler RC, Berglund P, Demler O, et al.: Lifetime Prevalence and Age-of-Onset Distributions of DSM-IV Disorders in the National Comorbidity Survey Replication. Arch Gen Psychiatry 2005, 62(6): 593-602.
- 2. Olatunji BO, Cisler JM, and Tolin DF: Quality of life in the anxiety disorders: A meta-analytic review. Clin Psychol Rev 2007, 27(5): 572-581.
- 3. Bruce SE, Yonkers KA, Otto MW, et al.: Influence of psychiatric comorbidity on recovery and recurrence in generalized anxiety disorder, social phobia, and panic disorder: a 12-year prospective study. Am J Psychiatry 2005, 162: 1179-1187.
- Beesdo K, Bittner A, Pine DS, et al.: Incidence of social anxiety disorder and the consistent risk for secondary depression in the first three decades of life.
 Arch Gen Psychiatry 2007, 64: 903-912.
- 5. Beesdo K, Pine DS, Lieb R, and Wittchen HU: Incidence and Risk Patterns of Anxiety and Depressive Disorders and Categorization of Generalized Anxiety Disorder. Arch Gen Psychiatry 2010, 67: 47-57.
- 6. Norton GR, McLeod L, Guertin J, et al.: Panic disorder or social phobia: which is worse? Behav Res Ther 1996, 34(3): 273-276.
- 7. Roy-Byrne PP and Katon W: Generalized anxiety disorder in primary care: the precursor/modifier pathway to increased health care utilization. J Clin Psychiatry 1997, 58: 34-40.
- Last CG, Hansen C, and Franco N: Anxious children in adulthood: A
 prospective study of adjustment. J Am Acad Child Adolesc Psychiatry 1997, 36:
 645-652.

- 9. Weissman MM, Wolk S, Wickramaratne P, et al.: Children with prepubertalonset major depressive disorder and anxiety grown up. Arch Gen Psychiatry 1999, 56(9): 794-801.
- 10. Greenberg PE, Sisitsky T, Kessler RC, et al.: The economic burden of anxiety disorders in the 1990s. J Clin Psychiatry 1999, 60: 427-435.
- 11. Canino G, Shrout PE, Rubio-Stipec M, et al.: The DSM-IV Rates of Child and Adolescent Disorders in Puerto Rico: Prevalence, Correlates, Service Use, and the Effects of Impairment. Arch Gen Psychiatry 2004, 61(1): 85-93.
- 12. Issakidis C and Andrews G: Service utilisation for anxiety in an Australian community sample. Soc Psychiatry Psychiatr Epidemiol 2002, 37: 153-163.
- Cicchetti D and Toth SL: The development of depression in children and adolescents. Am Psychol 1998, 53: 221-241.
- 14. Rapee RM and Spence SH: The etiology of social phobia: Empirical evidence and an initial model. Clin Psychol Rev 2004, 24: 737-767.
- 15. Rapee RM, Kennedy S, Ingram M, et al.: Prevention and early intervention of anxiety disorders in inhibited preschool children. J Consult Clin Psychol 2005, 73: 488-497.
- 16. Kennedy S, Rapee RM, and Edwards S: A selective intervention program for inhibited preschool-aged children of parents with an anxiety disorder: effects on current anxiety disorders and temperament. J Am Acad Child Adolesc Psychiatry 2009, 48: 602-609.
- 17. Andrews G, Issakidis C, Sanderson K, et al.: Utilising survey data to inform public policy: comparison of the cost-effectiveness of treatment of ten mental disorders. Br J Psychiatry 2004, 184: 526-533.

- Feldner MT, Zvolensky MJ, and Schmidt NB: Prevention of anxiety
 psychopathology: A critical review of the empirical literature. Clin Psychol Sci
 Pract 2004, 11: 405-424.
- 19. Rapee RM: Prevention of mental disorders: promises, limitations, and barriers.Cognitive and Behavioral Practice 2008, 15: 47-52.
- Mrazek PJ and Haggerty RJ, Reducing risks for mental disorders. 1994,
 Washington, DC: National Academy Press.
- Gordon R: An operational classification of disease prevention. Public Health
 Reports 1983, 98: 107–109
- 22. Offord DR, Chmura Kraemer H, Kazdin AE, et al.: Lowering the burden of suffering from child psychiatric disorder: Trade-offs among clinical, targeted, and universal interventions. . J Am Acad Child Adolesc Psychiatry 1998, 37: 686-694.
- 23. Barrett P and Turner C: Prevention of anxiety symptoms in primary school children: Preliminary results from a universal school-based trial. Br J Clin Psychol 2001, 40(4): 399-410.
- 24. Lowry-Webster HM, Barrett P, and Lock S: A Universal Prevention Trial of Anxiety Symptomology during Childhood:Results at 1-Year Follow-up. Behaviour Change 2003, 20: 25–43.
- Lock S and Barrett P: A Longitudinal Study of Developmental Differences in Universal Preventive Intervention for Child Anxiety. Behaviour Change 2003, 20: 183-199.
- 26. Lowry-Webster HM, Barrett P, and Dadds M: A Universal Prevention Trial of Anxiety and Depressive Symptomatology in Childhood:Preliminary Data from an Australian Study. Behaviour Change 2001, 18: 36–50.

- 27. Farrell LJ and Barrett P: Prevention of childhood emotional disorders: Reducing the burden of suffering associated with anxiety and depression. Child & Adolescent Mental Health 2007, 12: 58-65.
- 28. Kendall PC: Treating anxiety disorders in children: Results of a randomized clinical trial. J Consult Clin Psychol 1994, 62(1): 100-110.
- Barrett PM, Locks S, and Farrell LJ: Developmental Differences in Universal Preventive Intervention for Child Anxiety. Clin Child Psychol Psychiatry 2005, 10: 539-555.
- 30. Miller LD: Facing fears: The feasibility of anxiety universal prevention efforts with children and adolescents. Cognitive and Behavioral Practice 2008, 15(1): 28-35.
- 31. Stallard P, Simpson N, Anderson S, et al.: The FRIENDS Emotional Health
 Programme: Initial Findings from a School-Based Project. Child and Adolescent
 Mental Health 2007, 12(1): 32-37.
- 32. Stallard P, Simpson N, Anderson S, and Goddard M: The FRIENDS emotional health prevention programme: 12 month follow-up of a universal UK school based trial. Eur Child Adolesc Psychiatry 2008, 17(5): 283-289.
- 33. Barrett PM, Farrell LJ, Ollendick TH, and Dadds M: Long-Term Outcomes of an Australian Universal Prevention Trial of Anxiety and Depression Symptoms in Children and Youth: An Evaluation of the Friends Program. Journal of Clinical Child and Adolescent Psychology 2006, 35(3): 403-411.
- 34. Lyneham HJ and Rapee RM: Prevention of child and adolescent anxiety disorders. In Anxiety disorders in children and adolescents: Research, assessment, and intervention.2nd ed. Edited by Silverman W and Field A.Cambridge University Press: in press.

- Dadds M and Roth J: Prevention of Anxiety Disorders: Results of a UniversalTrial with Young Children. Journal of Child & Family Studies 2008, 17(3): 320-335.
- 36. Aune T and Stiles TC: Universal-Based Prevention of Syndromal and Subsyndromal Social Anxiety: A Randomized Controlled Study. J Consult Clin Psychol 2009, 77: 867–879.
- 37. Neil AL and Christensen H: Efficacy and effectiveness of school-based prevention and early intervention programs for anxiety. Clin Psychol Rev 2009, 29: 208-215. This paper provides a systematic review of school-based anxiety prevention programs.
- 38. Rapee RM, Schniering CA, and Hudson JL: Anxiety disorders during childhood and adolescence: Origins and treatment. Annual Review of Clinical Psychology 2009, 5: 311-341.
- 39. Rapee RM, Kennedy S, Ingram M, et al.: Altering the trajectory of anxiety in atrisk young children. Am J Psychiatry 2010, 167: 1518-1525.
- 40. Ginsburg GS: The Child Anxiety Prevention Study: Intervention model and primary outcomes. J Consult Clin Psychol 2009, 77(3): 580-587.
- 41. Balle M and Tortella-Feliu M: Efficacy of a brief school-based program for selective prevention of childhood anxiety. Anxiety, Stress, & Coping 2010, 23: 71-85.
- 42. Dadds MR, Holland DE, Laurens KR, et al.: Early intervention and prevention of anxiety disorders in children: Results at 2-year follow-up. J Consult Clin Psychol 1999, 67(1): 145-150.

- 43. Dadds MR, Spence SH, Holland DE, et al.: Prevention and Early Intervention for Anxiety Disorders: A Controlled Trial. J Consult Clin Psychol 1997, 65(4): 627-635.
- 44. Bernstein GA, Bernat DH, Victor AM, and Layne AE: School-based interventions for anxious children: 3-, 6-, and 12-month follow-ups. J Am Acad Child Adolesc Psychiatry 2008, 47(9): 1039-1047.
- 45. Bernstein GA, Layne AE, Egan EA, and Tennison DM: School-based interventions for anxious children. J Am Acad Child Adolesc Psychiatry 2005, 44(11): 1118-1127.
- 46. Hunt C, Andrews G, Crino R, et al.: Randomized controlled trial of an early intervention programme for adolescent anxiety disorders. Aust N Z J Psychiatry 2009, 43: 300-304.
- 47. Liddle I and Macmillan S: Evaluating the FRIENDS programme in a Scottish setting. Educational Psychology in Practice 2010, 26: 53-67.
- 48. Mifsud C and Rapee RM: Early intervention for childhood anxiety in a school setting: Outcomes for an economically disadvantaged population. J Am Acad Child Adolesc Psychiatry 2005, 44: 996-1004.
- 49. Craske MG and Barlow DH: Panic disorder and agoraphobia. In Clinical handbook of psychological disorders: A step-by-step treatment manual (3rd ed., p. 1-59). Edited by Barlow DH. New York, NY: Guilford Press.: 2001.
- 50. Ehlers A: A l-year prospective study of panic attacks: Clinical course and factors associated with maintenance. J Abnorm Psychol 1995, 104: 164-172.
- 51. Schmidt NB, Lerew DR, and Jackson RJ: The role of anxiety sensitivity in the pathogenesis of panic: Prospective evaluation of spontaneous panic attacks during acute stress. J Abnorm Psychol 1997, 106: 355-364.

- 52. Schmidt NB, Lerew DR, and Jackson RJ: Prospective evaluation of anxiety sensitivity in the pathogenesis of panic: Replication and extension J Abnorm Psychol 1999, 108: 532-537.
- 53. Gardenswartz CA and Craske MG: Prevention of Panic disorder. Behavior Therapy 2001, 32: 725--737.
- 54. Resnick H, Acierno R, Holmes M, et al.: Prevention of post-rape psychopathology: Preliminary findings of a controlled acute rape treatment study. J Anxiety Disord 1999, 13: 359-370.
- 55. La Greca AM and Silverman WS: Treatment and prevention of posttraumatic stress reactions in children and adolescents exposed to disasters and terrorism: What is the evidence? Child Development Perspectives 2009, 3: 4-10.
- 56. Feldner MT, Monson CM, and Friedman MJ: A Critical Analysis of Approaches to Targeted PTSD Prevention: Current Status and Theoretically Derived Future Directions. Behav Modif 2007, 31: 80-116.
- 57. Berger R, Pat-Horenczyk R, and Gelkopf M: School-based intervention for prevention and treatment of elementary-students' terror-related distress in Israel:

 A quasi-randomized controlled trial. J Trauma Stress 2007, 20(4): 541-551.
- 58. Gelkopf M and Berger R: A school-based, teacher-mediated prevention program (ERASE-Stress) for reducing terror-related traumatic reactions in Israeli youth:

 A quasi-randomized controlled trial. J Child Psychol Psychiatry 2009, 50: 962-971.
- 59. Schniering CA, Hudson JL, and Rapee RM: Issues in the diagnosis and assessment of anxiety disorders in children and adolescents. Clin Psychol Rev 2000, 40: 453-478.

- 60. Silverman WK and Ollendick TH: Evidence-based assessment of anxiety and its disorders in children and adolescents. J Clin Child Adolesc Psychol 2005, 34: 380-411.
- 61. Ashford J, Smit F, Van Lier PAC, et al.: Early risk indicators of internalizing problems in late childhood: a 9-year longitudinal study. J Child Psychol Psychiatry 2008, 49: 774-780.
- Dozois DJA: Prevention of anxiety psychopathology: Conceptual,
 methodological, and practical issues. Clin Psychol Sci Pract 2004, 11: 425-429.
- 63. Last CG, Perrin S, Hersen M, and Kazdin AE: A prospective study of childhood anxiety disorders. J Am Acad Child Adolesc Psychiatry 1996, 35: 1502-1510.
- 64. Hirshfeld-Becker DR and Biederman J: Rationale and principles for early intervention with young children at risk for anxiety disorders. Clinical Child and Family Psychology Review 2002, 5(3): 161-172.
- 65. Calear AL, Christensen H, Mackinnon A, et al.: The YouthMood Project: A cluster randomized controlled trial of an online cognitive behavioral program with adolescents. J Consult Clin Psychol 2009, 77: 1021-1032.
- 66. Masia-Warner C, Nangle DW, and Hansen DJ: Bringing evidence-based child mental health services to the schools: General issues and specific populations. Education and Treatment of Children 2006, 29: 165–172.
- 67. McLoone J, Hudson JL, and Rapee RM: Treating anxiety disorders in a school setting. Education and Treatment of Children 2006, 29: 219-242.
- 68. Andrews G, Szabo M, and Burns J: Preventing major depression in young people. Br J Psychiatry 2002, 181: 460-462.

CHAPTER 3

A RANDOMIZED CONTROLLED EVALUATION OF THE INCLUSION OF A CHILD COMPONENT TO AN EARLY INTERVENTION FOR INHIBITED PRESCHOOLERS

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Abstract

Background: Previous studies have demonstrated the efficacy of early intervention for anxiety in preschoolers through parent-education programs. The current study evaluated a six-session early intervention program for preschoolers at high risk of anxiety disorders in which the standard educational program for parents was supplemented by direct training of social skills to the children. **Methods:** Seventy-two children aged 3-5 years were selected based on high behavioral inhibition levels and concurrently having a parent with high emotional negativity. Families were randomly assigned to either the intervention group, which consisted of six parent-education group sessions and six child social skills training sessions, or waitlist. After six months, families on waitlist were offered treatment consisting of parent-education only. **Results:** Children in the parentand-child intervention group showed significantly greater reductions compared with waitlist at the 6 month follow-up on measures of anxiety disorders, anxiety symptoms, life interference and behavioral inhibition. All gains in the parent-and-child intervention group were maintained at the 12 month follow-up. A comparison of effect sizes showed that the parent-and-child intervention group achieved slightly larger effects than the parent-only intervention group. **Conclusions:** Results suggest that this brief early intervention program for preschoolers with both parent and child components significantly reduces risk and disorder in vulnerable children. Quasi-experimental comparison with the parent-only condition and previous parent-only interventions showed that the inclusion of a child component has the potential to increase the effect size of the intervention. Randomized controlled trials need to be run to confirm the additive benefits of the inclusion of the social skills training beyond the parenteducation program.

A Randomized Controlled Evaluation of the Inclusion of a Child Component to an

Early Intervention for Inhibited Preschoolers

Introduction

Anxiety disorders are the most prevalent psychiatric problem among children and adolescents and are strongly associated with reduced quality of life (Olatunji, Cisler, & Tolin, 2007; Rapee, Schniering, & Hudson, 2009). Epidemiological studies have demonstrated prevalence of anxiety disorders in children and adolescents ranging from 2.5% to 5%, depending on the methods used (Costello & Angold, 1995; Rapee et al., 2009). Anxiety disorders in childhood are strongly related to poor academic achievement and lower peer acceptance (Grover, Ginsburg, & Ialongo, 2007). Childhood anxiety is also strongly associated with additional anxiety disorders and other non-anxiety related psychiatric diagnoses such as depressive and disruptive disorders (Angold, Costello, & Erkanli, 1999; Ford, Goodman, & Meltzer, 2003; Lewinsohn, Zinbarg, Seeley, Lewinsohn, & Sack, 1997).

Research into the aetiology of anxiety has suggested a number of risk factors such as an inhibited temperament, parental anxiety, negative life events, and social-skill deficits (Rapee et al., 2009). Of these, a behaviorally inhibited temperament (i.e., the tendency to be vigilant and to exhibit withdrawn behavior in response to novel situations, people, and objects) in toddlerhood has been most widely studied and shown to be associated with elevated risk for later anxiety disorders (Hirshfeld-Becker et al., 2007; Hirshfeld-Becker, Micco, et al., 2008; Rubin, Burgess, & Hastings, 2002). Findings from a longitudinal prospective study show child anxiety symptoms and inhibited temperament to be the strongest predictors of future anxiety symptoms, suggesting that these child factors would be ideal identifiers for targeted interventions (Mian, Wainwright, Briggs-Gowan, & Carter, 2011).

Parental anxiety and negative affectivity have also been postulated to be strongly associated with child anxiety; children of anxious parents are up to four times more likely to meet criteria for an anxiety disorder when compared with children of non-anxious parents (Micco et al., 2009). It has been suggested that poor anxiety-regulation skills are passed from parents to their children through a variety of mechanisms including genetics, parental modelling of anxious behaviors and the tendency for anxious parents to adopt an overprotective parenting style (Hudson & Rapee, 2004). These latter environmental pathways of transmitting anxiety in particular can be targeted and altered through skills-based strategies such as gradual exposure, cognitive restructuring and parenting strategies.

Despite the early onset of anxiety disorders, there has been little research related to anxiety in preschoolers, possibly due to the fear of pathologizing young children. Nonetheless, research has shown that anxiety disorders do occur in very young children and the anxiety can significantly interfere with both the child's and family's lives (Carter et al., 2010; Kennedy, Rapee, & Edwards, 2009). Early intervention programs targetting children at high risk for anxiety disorders have reported encouraging evidence supporting the efficacy of brief interventions in reducing frequency and severity of anxiety disorders, as well as lowering levels of anxiety symptoms, for up to three years post intervention (Rapee, Kennedy, Ingram, Edwards, & Sweeney, 2010).

Some research in older children has suggested that the inclusion of both the parent and the child in treatment produces better outcomes than treating only the child, especially among younger children (Creswell & Cartwright-Hatton, 2007; Rapee et al., 2009). Further, a recent pilot study by Comer and colleagues (2012) reported the preliminary success of a 12-session intervention using a modified version of parent-child interaction therapy (PCIT) in reducing anxiety in young children. Other studies

including direct intervention with the young child have also shown some success at reducing anxiety symptom severity (Hirshfeld-Becker, Masek, et al., 2008; Waters, Ford, Wharton, & Cobham, 2009). Clearly, there is growing recognition that CBT can be conducted with children as young as preschool-age, particularly with parent involvement. Other empirically validated early intervention and prevention programs for anxious preschoolers have previously focussed on parent-education and have not typically included a direct intervention with the child (Dadds & Roth, 2008; Kennedy et al., 2009; Rapee, Kennedy, Ingram, Edwards, & Sweeney, 2005). Although significant effects have been shown with these early intervention programs, effect sizes have not been large. Thus, any methods to increase the effects are valuable. One risk factor for anxiety disorders that has received relatively little attention is poor social skills.

To begin with, as compared with their more sociable peers, behaviorially inhibited children demonstrate deficits in social and social-communicative skills (Bohlin, Hagekull, & Andersson, 2005; Coplan, Arbeau, & Armer, 2008). Moreover, there is some preliminary evidence to suggest that being equipped with positive social skills may help to forestall the development of socio-emotional difficulties (Coplan & Weeks, 2009). Indeed, poor social skills have been posited as both a cause and a consequence of at least one major form of anxiety, social anxiety (Rapee & Spence, 2004). Rapee and Spence (2004) suggested that deficits in social skills may lead to repeated unsuccessful interactions with others, which may influence personal judgments about social competence and social status among peers. This negative social experience results in a range of maladaptive cognitive processes and generates a sense of anxiety in future social encounters. Socially anxious individuals also tend to avoid social interactions hence limiting opportunities for social skills development. Thus, social

skills deficits may provide a good focus for early intervention programs that directly target the child (Coplan, DeBow, Schneider, & Graham, 2009).

Combining social skills programs with broader CBT skills has been shown to improve treatment outcomes for anxious young people (Silverman & Berman, 2001). A recent pilot study by Coplan and colleagues (2010) showed that preschool-aged children are able to actively engage in and benefit from direct clinician contact. In this Social Skills Facilitated Play (SST) program, inhibited preschoolers were directly taught verbal and non-verbal communication skills necessary for social interactions. At the end of the social skills program, children in the SST group displayed less reticentwary behaviors and more socially competent behaviors at preschool when compared with children in the waitlist control group.

Considering that social skills deficits confer additional risk for anxiety, and given the preliminary success achieved from this social skills training program for inhibited preschoolers, it was hypothesized that combining social skills training for young children with an education program for their parents could lead to superior outcomes compared with a parent-education program alone.

Method

Participants

The participants in this study were 72 children (38 boys, 34 girls) aged 36-65 months ($M_{age} = 52.1$). All the children had high scores on measures of behavioral inhibition and also had at least one parent who scored high on a measure of anxiety and/or depression. The children were attending local childcare centres and preschools in Sydney, Australia.

Target criteria to be included in the study were (1) age within 36-66 months at the time of recruitment; (2) a minimum of 30 (1.15 SD above the norm) on the child's score of behavioral inhibition on the Short Temperament Scale for Children as rated by one parent; (3) a minimum of 30 on at least one parent's self-reported scores on the Depression, Anxiety and Stress Scales (DASS); (4) no known diagnosis of any severe developmental disorders that would impede child's ability to engage in session; and (5) parents who were able to complete questionnaires in English.

Children were randomly assigned to the Parent-and-child Intervention Group (n=39) or the 6-month Waitlist Control (WLC, n=33) condition. The two groups did not differ significantly on age ($M_{\text{Int}} = 52.4 \text{ mos.}$, SD=7.4; $M_{\text{WLC}}=51.6 \text{ mos.}$, SD=7.3, t (72) = -.444, p=.658) or sex Intervention = 51.3% girls, Waitlist = 42.4% girls, t (72) = -.743, t (72). The flow diagram of participants is shown in Figure 1.

Measures

Behavioral inhibition. For inclusion in the study, one parent completed the *Short Temperament Scale for Children* (STSC: Prior, Smart, Sanson, & Oberklaid, 2000), designed for children aged 3 to 8 years. The STSC has 30 items and measures four temperament characteristics. The *approach* subscale, which assesses a child's tendency to approach or withdraw from unfamiliar people and situations, was the essential factor in this study, as it has previously been shown to predict anxiety and is strongly related to behavioral inhibition (Prior et al., 2000). Internal consistency in the current sample was α =.79.

Both parents also completed the *Behavioral Inhibition Questionnaire* (BIQ: Bishop, Spence, & McDonald, 2003), assessing the three main domains of behavioral inhibition (social, situational, physical caution). This measure has demonstrated strong

psychometric properties and evidence of validity (Broeren & Muris, 2010; Kim et al., 2011). In the present sample internal consistency was α =.89 for mothers and α =.92 for fathers).

Child anxiety symptoms. Both parents completed the *Preschool Anxiety Scale-Revised* (PAS-R: Edwards, Rapee, Kennedy, & Spence, 2010), a 28-item parent report of anxiety symptoms in preschool-aged children (α =.88 for mothers, α =.91 for fathers).

Child anxiety diagnosis. At least one parent was interviewed about their child's current anxiety using the Anxiety Disorders Interview Schedule for Children and Parents IV- Parent Version (ADIS-IV-P: Silverman & Albano, 1996). As only the anxiety disorders were relevant for the study, only the main section of the ADIS, which assesses separation anxiety disorder, social phobia, generalized anxiety disorder and specific phobias, was used. The ADIS-IV-P has shown good to excellent test-retest reliability for symptom scales and diagnoses (Silverman, Saavedra, & Pina, 2001) and has been used to track treatment changes in young children aged 3-6 years (e.g. Kennedy et al., 2009; Rapee et al., 2005; Rapee, Kennedy, et al., 2010). For each diagnosis, interviewers assign a clinician severity rating (CSR) that indicates the degree of distress, impairment and interference associated with the disorder. Diagnostic and follow-up interviews were completed by graduate students in clinical psychology who were trained to criterion. Reliability of diagnoses using the ADIS-IV-P has been established in preschool-aged children with kappas ranging from .77 to .86 (Kennedy et al., 2009; Rapee et al., 2005; Roth, Dadds, McAloon, Guastella, & Weems, 2004). In the current study, 20% of the videotaped ADIS interviews were coded for inter-rater reliability, with inter-rater kappas ranging from .72-.82.

At pre-treatment, children met criteria for primary anxiety diagnoses of social phobia (n= 49), generalized anxiety disorder (n=15), separation anxiety disorder (n=6) and specific phobia (n=2). Despite not being part of the inclusion criteria, 100% of the children had at least one anxiety disorder at pre-treatment.

Child anxiety life interference. Both parents completed the *Child Anxiety Life*Interference Scale—Preschool Version (CALIS-PV: Kennedy & Rapee, 2007), a 24item scale designed to assess the impact of anxiety on the child's life, on family life and on the parent's personal life (α =.92 for mothers, α =.94 for fathers).

Parent negative affectivity. As a screening measure, one willing parent (96% mothers) completed the trait version, short form of the *Depression*, *Anxiety and Stress Scales* (DASS: Lovibond & Lovibond, 1995) as a measure of their own trait negative affectivity (i.e., neuroticism) (α =.86).

Intervention Program

Parent-and-child Intervention Group protocol: Families randomly allocated to the intervention group were invited to participate in a program comprising 6 parent-education sessions and 6 social skills training sessions for the child. The intervention program was conducted in a small group format (5-7 families), with the 90 minute sessions held concurrently in adjacent rooms. Sessions were scheduled over 10 weeks, with breaks (first 4 sessions held once a week, followed by a 1-week break between sessions 4-5 and a 3-week between sessions 5-6) to allow parents time to practice skills.

Parent component: The "Cool Little Kids" program is an early intervention program aimed at addressing some of the core risk factors for anxiety (e.g., parental anxiety, parental overprotection, modeling of anxious behaviors) (Rapee, Lau, & Kennedy, 2010). All intervention groups were conducted by the main researcher (a

provisional psychologist undergoing clinical psychology training). Components of the intervention included psychoeducation, parental management strategies (e.g., praising, planned ignoring), exposure techniques and cognitive strategies (e.g., cognitive restructuring). Each family was provided with a workbook and given practice tasks to be completed during the week. This parent workbook is included as Appendix B.

Child component: The child component was a modified version of the "Social Skills Facilitated Play" program developed by (Coplan et al., 2010). Groups were mixed-gender and were co-led by two leaders who were either provisional psychologists or final-year psychology students. Groups were held in a play room (located in a university) containing age-appropriate toys and games. A video camera was installed to record all sessions.

The general format of the groups consisted of (1) 10 minutes of unstructured free play; (2) 15 minutes of "circle time"; (3) 55 minutes of leader-facilitated free play; and (4) 10 minutes of structured positive social activity. Skills taught in the program included initiating play, communicating to keep friends (e.g., sharing likes/dislikes), expressing feelings, and relaxation. The principal investigators reviewed recordings and met up with session leaders weekly to provide feedback and suggestions for improvement, and to review the content of upcoming sessions (to encourage and monitor therapists' continued adherence to treatment protocol).

Procedure

Parents who responded to the advertisement were sent the screening questionnaires (STSC and DASS) to be completed online. Families that met the inclusion criteria were further screened via a phone call where they were asked to report any known severe developmental delay. Eligible families were then invited for the

ADIS interview and questionnaires for parents were disseminated. A computer random number generator was used to randomly allocate the families to the intervention group or the waitlist control group. Upon completion of the pre-treatment assessment, the intervention group embarked on the program. Six months after the pre-treatment assessment, all families were invited to complete the 6 month follow-up ADIS assessment and questionnaires. At this point, the families in the waitlist group were offered the parent-education program (Cool Little Kids). The same assessment procedure was applied again 12 months after the pre-assessment. The clinicians assessing families at follow-up were blind to the group allocation.

Results

At the pre-treatment assessment, all families attended the interview. The 6 month follow-up interviews were attended by 98.6% and the 12 month interviews by 87.5% of families. Return rates of questionnaires were: (1) at pre-treatment 100%/94.9% for mothers/fathers in the intervention group, 93.9%/90.9% for mothers/fathers in waitlist group; (2) at 6 months 94.9%/84.6% for intervention mothers/fathers, 72.7%/60.6% for waitlist mothers/fathers, and (3) at 12 months 92.3%/82.1% for intervention mothers/fathers, 66.7%/54.5% waitlist mothers/fathers.

Efficacy of the Parent-Education Program and Child Social Skills Training vs. Waitlist Group at 6 Months

Analyses were run with all families that attended at least one session (referred to below as treatment starters). 97.4% of children attended at least one session and 92.3% of children attended most of the sessions (5 or 6 sessions), 97.4%/66.7% of mothers/fathers attended at least one session and 87.2%/17.9% of mothers/fathers

attended most of the sessions. In 12.8% of the families, both parents attended most of the sessions.

Anxiety diagnoses. Analysis of treatment starters at 6 months showed that 36.1% of the children in the intervention group were free of all anxiety diagnoses, compared with none in the waitlist group, $\chi^2(1, n=72) = 14.68$, p < .001. For total number of anxiety diagnoses, there was a significant main effect of time F(1,70)=103.67, p < .001, $\eta_p^2=0.61$ and a significant interaction of group by time F=(1,70)=66.59, p < .001, $\eta_p^2=0.50$, reflecting a significantly greater reduction in the number of anxiety diagnoses for those in the intervention group, compared with waitlist. Similarly, for total clinician severity ratings, there was a significant main effect of time F(1,70)=128.05, p < .001, $\eta_p^2=0.66$ and a significant interaction of group by time F(1,72)=84.96, p < .001, $\eta_p^2=0.56$, reflecting a significantly greater reduction in clinician severity ratings in the intervention group. Relevant means are displayed in Table 1.

Anxiety symptoms. Treatment starter analysis on mothers' reports of anxiety symptoms (PAS-R) reflected a significant main effect of time F(1,58)=18.27, p<.001, $\eta_p^2=0.24$, which was further qualified by a significant group by time interaction F(1,58)=16.42, p<.001, $\eta_p^2=0.21$. This showed that there was a significantly greater reduction of maternal reported anxiety symptoms in the intervention group. Fathers' reports on the other hand, showed only a significant main effect of time F(1,51)=8.62, p<.01, $\eta_p^2=0.15$, whereas the group by time interaction was not significant F(1,51)=.977, p=.328, $\eta_p^2=0.02$.

Life interference. On maternal report, there was a significant main effect of time for the interference scale F(1,58)=26.49, p<.001, $\eta_p^2=0.31$ and a significant group

by time interaction F(1,58)=20.81, p<.001, $\eta_p^2=0.26$, suggesting that there was a significantly greater reduction of maternal reported life interference in the intervention group. On paternal report, a significant main effect of time was observed for life interference F(1,51)=7.84, p<.01, $\eta_p^2=0.13$. However, the interaction of group by time was not significant F(1,51)=.094, p=.761, $\eta_p^2=0.002$.

Behavioral inhibition. On maternal report of behavioral inhibition (BIQ), there was a significant main effect of time F(1,58)=53.87, p<.001, η_p^2 =0.48 qualified by a significant group by time interaction F(1,58)=4.04, p<.05, η_p^2 =0.07. This suggested that there was a significantly greater reduction on maternal reported behavioral inhibition in the intervention group. Paternal report showed a significant main effect of time F(1,51)=26.6, p<.001, η_p^2 =0.34 but a non-significant interaction F(1,51)=2.59, p=.114, η_p^2 =0.05.

All the analyses were re-run using an intent-to-treat analysis and missing data were imputed based on the Last Observation Carried Forward method. Results on the anxiety diagnoses, symptoms, life interference and maternal report of BIQ all showed similar patterns of results and significance. The only measure that differed was the paternal report of BIQ, where the intent-to-treat analysis saw the group by time interaction reaching significance (F(1,65)=5.20, p<.05, $\eta_p^2=0.07$).

Parent-Education and Child Social Skills Training at 12-Month Follow-Up

At the 6 month time point, the waitlist group was offered a treatment program and thus there was no longer a waitlist comparison for the intervention group. At the 12 month follow-up, 67.6 % of children in the intervention group were diagnosis free. Further analysis reflected that all gains made at the 6 month follow-up were maintained at 12 months. Table 1 provides descriptive statistics for the outcome variables.

Significant reductions from 6 to 12 months were observed in total clinician severity rating, t(36)=2.16, p<.05 (two-tailed), maternal report of anxiety symptoms, t(33)=2.82, p<.05, and paternal report of behavioral inhibition, t(26)=2.28, p<.05). All other measures reflected reductions in means that were not statistically significant (all p's>.05).

Quasi-Experimental Comparison of the Two Active Treatments

Since families in the waitlist were offered the parent-only intervention after 6 months, it was possible to compare these outcomes with those of the parent-and-child group. It must be noted that allocation to the parent-only treatment was not random and the time point of comparison between the treatments was different. Hence, changes over time from pre-treatment to 6 months for children in the parent-and-child group were compared with changes from 6 months to 12 months for children whose parents were offered the parent-education only intervention. All families that attended at least one session (treatment starters) were included in the analysis.

Mothers in the parent-and-child group attended significantly more sessions (M=5.42, SD=.89) than did mothers in the parent-only group (M=4.70, SD=1.66) (F(1,57)=4.68, p<.05). The total number of sessions attended by fathers did not differ significantly between the parent-and-child group (M=1.74, SD=2.04) and the parent-only group (M=1.55, SD=2.01) (F(1,57)=0.11, p=.740).

Relevant descriptive statistics are displayed in Table 1. There was a significant main effect of time F(1,55)=166.79, p<.001, $\eta_p^2=0.75$ on the number of anxiety disorders diagnoses but no significant interaction of group by time F(1,55)=.652, p=.423, $\eta_p^2=0.01$. Clinician severity ratings similarly showed a significant main effect of

time F(1,55)=146.15, p<.001, $\eta_p^2=0.73$ and no significant interaction of group by time F(1,55)=1.19, p=.280, $\eta_p^2=0.02$.

Maternal reports of anxiety symptoms showed a significant main effect of time F(1,53)=40.30, p<.001, $\eta_p^2=0.43$ and a non-significant interaction effect F(1,53)=0.16, p=.689, $\eta_p^2=0.003$. Paternal reports similarly showed a significant main effect of time F(1,46)=13.42, p<.005, $\eta_p^2=0.23$ and non-significant interaction F(1,46)=0.16, p=.690, $\eta_p^2=0.003$. The same pattern was also demonstrated for life interference (maternal reports: main effect of time, F(1,54)=58.31, p<.001, $\eta_p^2=0.52$, group by time interaction, F(1,54)=0.07, p=.799, $\eta_p^2=0.001$; paternal reports: main effect of time, F(1,46)=12.01, p<.005, $\eta_p^2=.20$ interaction, F(1,46)=0.65, p=.425, $\eta_p^2=0.01$) and behavioral inhibition (maternal reports: time main effect, F(1,54)=66.16, p<.001, $\eta_p^2=0.55$, group by time interaction, F(1,54)=0.28, p=.600, $\eta_p^2=0.005$; paternal reports: main effect of time, F(1,46)=48.70, p<.001, $\eta_p^2=0.51$, interaction, F(1,46)=1.35, p=.252, $\eta_p^2=0.03$).

Discussion

This study supports the efficacy of a brief 6 session intervention for extremely inhibited preschoolers who also have a parent who experiences high levels of negative affectivity. Whereas previous studies with this type of population have generally provided educational intervention only to the parents, the current study is the first to combine such parent-education with social skills training provided directly to children. Compared with those on waitlist, children of families offered parent-and-child intervention displayed significantly greater improvement on total number of anxiety disorders, clinician severity rating, maternal reports of anxiety symptoms, and life interference. Fathers' reports reflected a trend for those receiving active intervention to improve more than children on waitlist, but the group difference failed to reach

statistical significance. This inconsistency may reflect the lower power among the paternal analyses or the greater sensitivity of mothers to subtle changes in their child over a short period of time.

Noteworthy is the improvement on both clinician ratings and parent ratings among the waitlist group despite the absence of active intervention. Studies have shown some tendency for reductions in anxiety over time among very young anxious children (Last, Perrin, Hersen, & Kazdin, 1996; Rapee et al., 2005) and a similar pattern was apparent on most of our measures. These changes may reflect regression to the mean, natural maturation, or active attempts by families to reduce anxiousness in their child. Yet, granted the spontanous improvement by the waitlist group, the families that received the parent-and-child intervention improved significantly more over that 6 month period, representing the value of receiving the intervention. Importantly, even though all children improved across several areas such as clinician rated severity and parent reported symptoms and interference, none of the children in the waitlist group were free of anxiety diagnoses at 6 months, whereas 36.1% of the children in the parent-and-child intervention were free of clinically significant anxiety. This finding is congruent with previous intervention studies that have found significant changes on diagnostic status in the intervention group but minimal changes in the waitlist group (Kennedy et al., 2009). Importantly, it is also encouraging that gains made by the parent-and-child intervention group were maintained and in fact increased at the 12 month follow-up.

A core question raised by these results is whether the addition of direct training in social skills for young children produces significantly larger effects than intervention delivered to parents alone. The primary purpose of the current research was to demonstrate that the combined intervention is feasible and hence this initial study

randomized to either combined intervention or waitlist. However, by providing children on the waitlist with intervention for their parents after the waiting period, we were able to compare the two active interventions using a quasi-experimental design. According to these results, the addition of a child social skills intervention did not add significant efficacy to parent-education alone. However, by 6-12 months, the sample sizes were especially small (39 vs. 21) and this only provided sufficient power to detect relatively large differences. It is very unlikely that two active interventions would differ by more than small effects. Interestingly, the mean scores indicated superior effects for the combined intervention on all variables except behavioral inhibition, which showed a significant change over time on both conditions.

When compared with the parent-only early intervention trial reported by Kennedy and colleagues (2009), children offered the combined parent/child intervention in the current study showed larger effect sizes in mean clinician severity ratings (η_p^2 =0.5 vs. η_p^2 =0.2), maternal reported anxiety symptoms (η_p^2 =0.21 vs. η_p^2 =0.17) and child life interferences (η_p^2 =0.26 vs. η_p^2 =0.17). Small increments in effect sizes should not be neglected as implementation on a wide scale can affect large numbers of individuals. These results suggest that the inclusion of a child social skills training component might produce slightly superior results to running the parent-education program alone. The social skills training could have achieved the added benefit through addressing an additional risk factor. The content of the social skills training provides the child with new skills or reinforced their learning of these social skills and the presence of peers also gave them the opportunity to practice these skills in a safe environment. Simply attending the sessions also provided the children with the opportunity to be separated from parents and to experience social interactions in a safe environment. This gives the child the opportunity to be exposed to anxiety provoking situations and in turn

to learn that they can cope with the situation. For parents, witnessing their child coping in challenging situations also encourages them to promote independence and reduce avoidance. Randomised controlled trials are necessary to determine whether there are in fact reliable additive benefits to the inclusion of a child social skills component. However, it is worth acknowledging that the addition of a child social skills program has the potential to achieve better effects than running a parent-education component alone.

Reduction of temperamental risk is also an important issue for both practical and theoretical reasons, yet mixed results have been produced in previous studies. Rapee et al. (2005) did not report a significant reduction in behavioral inhibition across groups, whereas Kennedy et al. (2009) found significantly greater reduction of inhibition in the intervention group. Importantly, in the current study, significant reductions were produced by the intervention in inhibition as reported by mothers. However, a comparison of effect sizes revealed that the program conducted by Kennedy et al. (2009) produced larger effects on both maternal ($\eta_p^2 = 0.16$ vs. $\eta_p^2 = 0.07$) and paternal ($\eta_p^2 = 0.12$) vs. $\eta_{\text{p}}^{\ 2}$ =0.05) reported inhibition. Given that inhibition has been shown to be more stable when the risk status is high, this larger effect is not surprising considering that Kennedy et al. (2009) selected children at a higher risk than we did in the current study. This may have resulted in more consistent inhibition across the waitlist allowing the effects of the active intervention to be more clearly demonstrated. Since inhibition is one of the key risk factors for anxiety disorders, better understanding of the factors that influence reductions in inhibition is crucial to improve interventions that modify this core risk factor.

A limitation of the study is the short waitlist time. Although all gains made by the intervention group were maintained at the 12 month follow-up, group differences were unable to be established at that point as the waitlist group was treated after 6 months. In a longitudinal study, Rapee, Kennedy and colleagues (2010) reported that the differences between intervention and monitoring groups were maintained three years following intervention and there is little reason to believe that similar differences would not be shown with the current program. But this remains to be empirically demonstrated. Another limitation of the study is that a measure of child social skills was not included. A well validated measure of child social skills both at baseline and follow-up would give insight into whether the additional child component indeed improved the child's social skills and would also be able to shed light on whether the proficiency of social skills may in fact mediate treatment effects. Other limitations of the study also include parental symptom data only being available for mothers and also the low return rates for questionnaire measures in the waitlist group.

The briefness of the selection procedure in this study is also worthy of mention. Previous studies have also used clinician administered interviews to establish parental anxiety disorders and laboratory observations as to assess child behavioral inhibition (Kennedy et al., 2009; Rapee et al., 2005). Although this multi-modal assessment may result in more confidence of the BI status or parental anxiety disorder status, they are time consuming and costly and as a result unlikely to be utilized in the public health system. The selection criteria used for this study were based solely on questionnaire screening and yet was able to identify suitable participants, which makes implementation of the program efficient on a large scale.

Key Points:

- Combined parent-and-child intervention produces significant change relative to waitlist on measures of total clinician severity, anxiety symptoms, life interference and behavioral inhibition.
- Gains made from the combined parent-and-child intervention were maintained and even increased 12 months later.
- Combined parent-and-child intervention may have the potential to produce
 larger effects than a parent-only program suggesting that the addition of a social
 skills component for children may increase effects of the intervention.

Table 1							
Means (SDs) Across Conditions							
Measure	Parent-and-child Intervention			Waitlist Group		Parent Intervention	
	Pre-Intervention Mean (SD)	6 month follow- up Mean (SD)	12 month follow-up Mean (SD)	Pre-Intervention Mean (SD)	6 month follow- up Mean (SD)	Pre-Intervention Mean (SD)	6 month follow- up Mean (SD)
CSR	22.64 (6.75)	9.61 (5.17)	7.89 (4.86)	20.91 (9.28)	19.00 (8.20)	19.90 (8.08)	9.55 (5.53)
PAS-R (mother)	61.83 (12.94)	42.29 (14.50)	39.94 (14.75)	64.00 (14.09)	63.48 (17.85)	63.61 (19.49)	46.94 (17.81)
PAS-R (father)	53.58 (16.40)	42.39 (16.66)	36.19 (15.20)	64.25 (18.61)	42.39 (17.42)	63.33 (17.28)	49.40 (17.63)
CALIS-PV (mother)	52.34 (11.85)	39.06 (11.62)	37.17 (11.57)	50.48 (10.07)	49.68 (11.45)	51.79 (10.70)	40.32 (9.60)
CALIS-PV (father)	46.33 (10.80)	40.73 (14.10)	33.31 (8.22)	54.40 (12.15)	49.90 (11.65)	52.93 (11.47)	43.93 (12.10)
BIQ (mother)	162.34 (20.96)	130.06 (28.83)	123.91 (27.82)	167.20 (21.44)	148.80 (24.39)	151.32 (25.90)	123.47 (20.72)
BIQ (father)	152.85(19.10)	131.21 (29.27)	122.59 (24.42)	165.00 (20.61)	153.65 (26.69)	155.40 (27.94)	125.13 (20.48)

Note: CSR= Clinician Severity Rating for anxiety diagnoses; PAS-R= Preschool Anxiety Scale- Revised; CALIS-PV= Child Anxiety Life Interference Scale- Preschool Version; BIQ= Behavioral Inhibition Questionnaire.

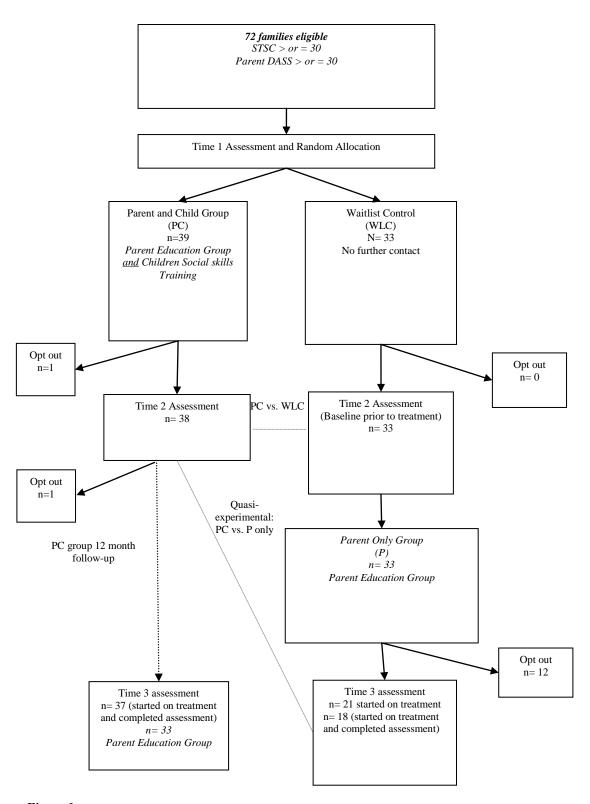


Figure 1. Flow diagram of participants

STSC= Short temperament Scale for Children; DASS= Depression and Anxiety Stress Scale ----- represents analyses presented in this paper

References

- Angold, A., Costello, E. J., & Erkanli, A. (1999). Comorbidity. *Journal of Child Psychology and Psychiatry*, 40(1), 57-87.
- Bishop, G., Spence, S. H., & McDonald, C. (2003). Can Parents and Teachers Provide a Reliable and Valid Report of Behavioral Inhibition? *Child Development*, 74(6), 1899-1917.
- Bohlin, G., Hagekull, B., & Andersson, K. (2005). Behavioral inhibition as a precursor of peer social competence in early school age: The interplay with attachment and nonparental care. *Merrill-Palmer Quarterly*, *51*, 1-19.
- Broeren, S., & Muris, P. (2010). A Psychometric Evaluation of the Behavioral Inhibition Questionnaire in a Non-Clinical Sample of Dutch Children and Adolescents. *Child Psychiatry & Human Development*, 41(2), 214-229.
- Carter, A. S., Wagmiller, R. J., Gray, S. A. O., McCarthy, K. J., Horwitz, S. M., & Briggs-Gowan, M. J. (2010). Prevalence of DSM-IV Disorder in a Representative, Healthy Birth Cohort at School Entry: Sociodemographic Risks and Social Adaptation. *Journal of the American Academy of Child and Adolescent Psychiatry*, 49(7), 686-698.
- Comer, J. S., Puliafico, A. C., Aschenbrand, S. G., McKnight, K., Robin, J. A., Goldfine, M. E., & Albano, A. M. (2012). A pilot feasibility evaluation of the CALM Program for anxiety disorders in early childhood. *Journal of Anxiety Disorders*, 26(1), 40-49.
- Coplan, R. J., Arbeau, K. A., & Armer, M. (2008). Don't fret, be supportive! Maternal characteristics linking child shyness to psychosocial and school adjustment in kindergarten. *Journal of Abnormal Child Psychology*, *36*, 359-371.

- Coplan, R. J., DeBow, A., Schneider, B. H., & Graham, A. A. (2009). The social behaviors of extremely inhibited children in and out of preschool. *British Journal of Developmental Psychology*, 27, 891-905.
- Coplan, R. J., Schneider, B. H., Matheson, A., & Graham, A. (2010). 'Play skills' for shy children: Development of a Social Skills Facilitated Play early intervention program for extremely inhibited preschoolers. *Infant & Child Development*, 19(3), 223-237.
- Coplan, R. J., & Weeks, M. (2009). Shy and soft-spoken? Shyness, pragmatic language, and socio-emotional adjustment in early childhood. *Infant and Child Development*, 18, 238-254.
- Costello, E. J., & Angold, A. (1995). Epidemiology. In J. S. March (Ed.), *Anxiety disorders in children and adolescents* (pp. 109-124). New York: The Guilford Press.
- Creswell, C., & Cartwright-Hatton, S. (2007). Family Treatment of Child Anxiety:

 Outcomes, Limitations and Future Directions. *Clinical Child & Family Psychology Review, 10*(3), 232-252.
- Dadds, M., & Roth, J. (2008). Prevention of anxiety disorders: Results of a universal trial with young children. *Journal of Child & Family Studies*, 17(3), 320-335.
- Edwards, S. L., Rapee, R. M., Kennedy, S. J., & Spence, S. H. (2010). The assessment of anxiety symptoms in preschool-aged children: The Revised Preschool

 Anxiety Scale. *Journal of Clinical Child & Adolescent Psychology, 39*(3), 400 409.
- Ford, T., Goodman, R., & Meltzer, H. (2003). The British child and adolescent mental health survey 1999: The prevalence of DSM-IV disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*, 42(10), 1203-1211.

- Grover, R. L., Ginsburg, G. S., & Ialongo, N. (2007). Psychosocial outcomes of anxious first graders: A seven-year follow-up. *Depression and Anxiety*, 24(6), 410-420.
- Hirshfeld-Becker, D. R., Biederman, J., Henin, A., Faraone, S. V., Davis, S., Harrington,
 K., & Rosenbaum, J. F. (2007). Behavioral inhibition in preschool children at
 risk is a specific predictor of middle childhood social anxiety: A five-year
 follow-up. *Journal of Developmental & Behavioral Pediatrics*, 28(3), 225-233.
- Hirshfeld-Becker, D. R., Masek, B., Henin, A., Blakely, L. R., Rettew, D. C., Dufton, L., . . . Biederman, J. (2008). Cognitive-Behavioral Intervention with Young Anxious Children. [Article]. *Harvard Review of Psychiatry*, 16(2), 113-125.
- Hirshfeld-Becker, D. R., Micco, J., Henin, A., Bloomfield, A., Biederman, J., & Rosenbaum, J. (2008). Behavioral inhibition. *Depression and Anxiety*, 25(4), 357-367.
- Hudson, J., & Rapee, R. M. (2004). From anxious temperament to disorder: An etiological model of generalized anxiety disorder. In R. G. Heimberg, C. L. Turk
 & D. S. Mennin (Eds.), *Generalized Anxiety Disorder: Advances in Research and Practice*. New York: Guilford Press.
- Kennedy, S. J., & Rapee, R. M. (2007). Development and Psychometric Properties of the Preschool Version of the Child Anxiety Life Interference Scale.Unpublished manuscript.
- Kennedy, S. J., Rapee, R. M., & Edwards, S. L. (2009). A selective intervention program for inhibited preschool-aged children of parents with an anxiety disorder: Effects on current anxiety disorders and temperament. *Journal of the American Academy of Child & Adolescent Psychiatry*, 48(6), 602-609.

- Kim, J., Klein, D. N., Olino, T. M., Dyson, M. W., Dougherty, L. R., & Durbin, C. E.(2011). Psychometric Properties of the Behavioral Inhibition Questionnaire inPreschool Children. *Journal of Personality Assessment*, 93(6), 545-555.
- Last, C. G., Perrin, S., Hersen, M., & Kazdin, A. E. (1996). A prospective study of childhood anxiety disorders. *Journal of the American Academy of Child & Adolescent Psychiatry*, 35, 1502-1510.
- Lewinsohn, P. M., Zinbarg, R., Seeley, J. R., Lewinsohn, M., & Sack, W. H. (1997).
 Lifetime comorbidity among anxiety disorders and between anxiety disorders and other mental disorders in adolescents. *Journal of Anxiety Disorders*, 11(4), 377-394.
- Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states:

 Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck

 Depression and Anxiety Inventories. *Behaviour Research and Therapy*, 33(3),

 335-343.
- Mian, N. D., Wainwright, L., Briggs-Gowan, M. J., & Carter, A. S. (2011). An ecological risk model for early childhood anxiety: The importance of early child symptoms and temperament. *Journal of Abnormal Child Psychology*, 39(4), 501-512.
- Micco, J. A., Henin, A., Mick, E., Kim, S., Hopkins, C. A., Biederman, J., & Hirshfeld-Becker, D. R. (2009). Anxiety and depressive disorders in offspring at high risk for anxiety: A meta-analysis. *Journal of Anxiety Disorders*, 23(8), 1158-1164.
- Olatunji, B. O., Cisler, J. M., & Tolin, D. F. (2007). Quality of life in the anxiety disorders: A meta-analytic review. *Clinical Psychology Review*, 27(5), 572-581.

- Prior, M., Smart, D., Sanson, A., & Oberklaid, F. (2000). Does shy-inhibited temperament in childhood lead to anxiety problems in adolescence? *Journal of the American Academy of Child & Adolescent Psychiatry*, 39, 461-468.
- Rapee, R. M., Kennedy, S. J., Ingram, M., Edwards, S., & Sweeney, L. (2005).
 Prevention and early intervention of anxiety disorders in inhibited preschool children. *Journal of Consulting and Clinical Psychology*, 73, 488-497.
- Rapee, R. M., Kennedy, S. J., Ingram, M., Edwards, S. L., & Sweeney, L. (2010).
 Altering the Trajectory of Anxiety in At-Risk Young Children. *American Journal of Psychiatry*, 167, 1518-1525.
- Rapee, R. M., Lau, E. X., & Kennedy, S. J. (2010). *Cool Little Kids Program Parent's Workbook*. Centre for Emotional Health: Macquarie University, Sydney.
- Rapee, R. M., Schniering, C. A., & Hudson, J. L. (2009). Anxiety disorders during childhood and adolescence: Origins and treatment. *Annual Review of Clinical Psychology*, 5(1), 311-341.
- Rapee, R. M., & Spence, S. H. (2004). The etiology of social phobia: empirical evidence and an initial model. *Clinical Psychology Review*, 24(7), 737-767.
- Roth, J., Dadds, M., McAloon, J., Guastella, A., & Weems, C. F. (2004). Prevalence and Prediction of Disorders in Early Childhood: A Community Study.

 Behaviour Change, 21, 215–228.
- Rubin, K. H., Burgess, K. B., & Hastings, P. D. (2002). Stability and social-behavioral consequences of toddlers inhibited temperament and parenting behaviors. *Child Development*, 73(2), 483.
- Silverman, W. K., & Albano, A. M. (1996). *The Anxiety Disorders Interview Schedule*for Children-IV (Child and Parent Versions). San Antonio: Psychological

 Corporation.

- Silverman, W. K., & Berman, S. L. (2001). Psychosocial Interventions for Anxiety

 Disorders in Children: Status and Future Directions. In W. K. Silverman & P. D.

 A. Treffers (Eds.), *Anxiety Disorders in Children and Adolescents: Research, Assessment and Intervention*. Cambridge, UK: Cambridge University Press.
- Silverman, W. K., Saavedra, L. M., & Pina, A. A. (2001). Test-retest reliability of anxiety symptoms and diagnoses with anxiety disorders interview schedule for DSM-IV: Child and parent versions. *Journal of the American Academy of Child & Adolescent Psychiatry*, 40, 937-943.
- Waters, A. M., Ford, L. A., Wharton, T. A., & Cobham, V. E. (2009). Cognitive-behavioural therapy for young children with anxiety disorders: Comparison of a Child + Parent condition versus a Parent only condition. *Behaviour Research* and *Therapy*, 47, 654-662.

CHAPTER 4

MATERNAL OVERPROTECTION AS A MODERATOR AND MEDIATOR OF EALY INTERVENTION FOR ANXIOUS CHILDREN

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Abstract

The link between childhood anxiety and parental overprotection is amply demonstrated

in the literature. In spite of this, there has been no research on either the influence of

overprotection on the efficacy of treatment programs (i.e. as a moderator), or the role of

overprotection as a mediator through which interventions take effect. In this study, 95

children aged 36 to 65 months who scored high on measures of inhibition underwent an

early intervention program after which changes in parental overprotection, clinician

severity ratings of anxiety disorders and parent reported anxiety symptoms were

examined. The analyses were based on 81 mothers and 64 fathers who returned the

questionnaires at the 6 month follow-up. Results showed a negative relationship

between baseline maternal overprotection and the outcome of treatment as measured by

clinician severity ratings, suggesting that maternal overprotection moderates treatment

outcome measured by clinicians. No significant relationship was found, however, when

the outcome was measured using maternal reported child anxiety symptoms. Paternal

overprotection at baseline also did not reflect a significant association with paternal and

clinician reported outcomes. Further, overprotection was not shown to mediate

treatment outcome suggesting that this particular intervention program did not achieve

change through the alteration of parental overprotection.

Keywords: Anxiety; Parental overprotection; Treatment outcome; Preschool; Children,

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Introduction

Anxiety disorders confer high levels of psychosocial impact on sufferers and are already highly prevalent prior to adulthood (Benjamin, Costello, & Warren, 1990; Ford, Goodman, & Meltzer, 2003). Childhood anxiety has been associated with a range of difficulties, particularly in the areas of peer relations, self-esteem and school performance (Strauss, Frame, & Forehand, 1987). Epidemiological and longitudinal studies have shown that anxiety is likely to continue into adolescence and later into adulthood (Bittner et al., 2007; Pine, Cohen, Gurley, Brook, & Ma, 1998). Treatment of childhood anxiety has been shown to be efficacious and recent efforts have focused on early intervention programs aimed at preventing anxiety in childhood (e.g. Lau & Rapee, 2011). The design of such programs, and in turn their success, is necessarily guided by an understanding of any variables that potentially impact the efficacy of intervention or serve as a mechanism by which change is achieved.

One such variable is parental overprotection which some etiological models of anxiety have suggested play an important part in the development of anxiety (Hudson & Rapee, 2004; Rubin, Coplan, & Bowker, 2009). However, the causal relationship between parental overprotection and anxiety has yet to be convincingly demonstrated (Rapee, Schniering, & Hudson, 2009). A parent's overprotection, due in many cases to their own anxiety, may cause the child to become anxious (Edwards, Rapee, & Kennedy, 2010); The inverse may also be true—where a child's anxiety, shyness or behavioral inhibition elicits overprotection (Hudson, Doyle, & Gar, 2009; Rubin, Nelson, Hastings, & Asendorpf, 1999). More likely, the two affect each other bidirectionally—overprotection exacerbating child anxiety which in turn elicits further

overprotective behaviors (Hudson & Rapee, 2004; Rubin & Mills, 1991). In other words, both child anxiety and parental overprotection may be related to parent anxiety disorder, and that parental overprotection may serve as a proxy variable for parental anxiety disorder which may exert effects also through genetic diathesis or modeling.

Overprotection has also been found to be associated with social anxiety symptoms such as reticence, as well as with hallmarks of generalized anxiety disorder such as rumination, brooding and catastrophizing (Manfredi et al., 2011). Children's current perceptions of maternal overprotection have also been shown to be associated with the child's anxiety (Bögels, van Oosten, Muris, & Smulders, 2001) and retrospective studies have also shown associations between recollections of maternal overprotection and later anxiety (Spokas & Heimberg, 2009). Overprotection has been suggested to contribute to anxiety by overprotective parents allowing and encouraging their child to adopt poor coping skills such as avoidance (Edwards, Rapee, & Kennedy, 2010; Hudson & Rapee, 2004; Rubin et al., 2009). It is postulated that this excessive protection leads the child to believe that the world is a dangerous place and deprives the child of the opportunity to be exposed to feared situations in order to disprove this belief (Rapee, 1997, 2012). One of the main components of treatment for anxiety is in vivo exposure, where the child is gradually exposed to anxiety provoking situations or stimuli, often with parents guiding them through the process. Since overprotective parents would tend to be averse to engaging in exposure, they may allow their child to avoid the anxiety provoking stimuli, or expose them at a slower rate. In other words, parental overprotection may undermine exposure as an integral component of treatment. Children with more overprotective parents would thus be expected to perform more poorly in treatment. Overprotection may also moderate treatment outcomes due to overprotective parents having children with more severe anxiety possibly as a result of

genetic factors or modeling of anxious behaviors. This additional risk factor for anxiety may thus deem these children to be less responsive to treatment.

In view of evidence that parental overprotection is a risk factor for anxiety (e.g., Edwards et al., 2010), it is also possible that overprotection will act as a mediator of treatment. In other words, early intervention may work, at least partly, by reducing overprotection, which in turn, should reduce the child's anxiety. Consistent with this proposal, early interventions for children's anxiety often claim a core focus on altering parental protection (e.g. Bayer et al., 2011; LaFrenière & Dumas, 1992).

Despite the relationship between overprotection and childhood anxiety, no studies to date have examined the impact of parental overprotection on treatment outcomes. In a related area, evidence suggests that the family's accommodation of the child's OCD behaviors predicts poorer treatment outcome (Merlo, Lehmkuhl, Geffken, & Storch, 2009; Storch et al., 2010). Accommodation refers to family acceptance of and support for OCD behaviors and hence is closely related to the construct of overprotection. Further evidence suggests that a variety of family variables, including accommodation, can affect treatment response for anxiety (Rapee, 2012). Hence, parental overprotection may similarly affect outcomes for interventions with childhood anxiety, and given the key role of overprotection in models of the development of anxiety, this variable deserves detailed examination. Based on the suggestions above, it was hypothesized that parental overprotection will be an important influence on treatment outcome (moderator) and also a key variable through which intervention operates (mediator).

Method

Participants

This study combined data from two separate early intervention programs for anxious preschoolers. The participants in the first study (Kennedy, Rapee, & Edwards, 2009) were 71 children aged between 36 and 58 months (mean age 47.07 months, SD 7.05) and their parents. The children scored high on a laboratory measure of behavioural inhibition and at least one parent had a diagnosis for an anxiety disorder. The second study (Lau, Rapee, & Coplan, 2012) comprised 72 children aged between 36 and 65 months (mean age 52.06 months, SD 7.33) who scored high on parent reported measures of behavioral inhibition and also had a parent who was somewhat anxious or depressed. Of the 71 children in the first study, 35 families were randomly allocated to the parent intervention and 36 families to a 6 month waitlist group. In the second study, 39 families were randomly allocated to the parent-and-child intervention and the other 33 to a 6 month waitlist control group; later, the families in the 6 month waitlist were offered a parent education intervention program, which 21 of the 33 families chose to attend. Only families that received intervention were included in the analysis and thus a total of 95 families across the two studies were included. Despite not being an inclusion criterion, all 95 of the children met criteria for at least one anxiety disorder, at the point of recruitment. For correlational analyses, with 95 subjects, the power to detect a medium effect size would be in excess of .95, using a critical value of .05.

Measures

In both studies, both parents were given a set of questionnaires to complete prior to the start of treatment as a baseline measure; the questionnaires were administered again at the 6 month follow-up.

Measure of parental overprotection

Both studies used the Parental Overprotection Measure (POM: Edwards, Rapee, & Kennedy, 2008) which focused on parental behaviours—as opposed to cognitions or beliefs—and tapped situations that were potentially threatening to either the parent or child. This measure included items such as "I comfort my child immediately when he/she cries" and "When playing in a park, I keep my child within a close distance of me" and has been found to have high internal consistency and 12-month test-retest reliability (Edwards et al., 2008). The study by Kennedy et al. (2009) utilised a 21-item version of the measure, whereas the later study by Lau et al. (2012) used a 19-item version as two items were removed in the final questionnaire by Edwards and colleagues (2008) as more than 75% of the responses on these two items endorsed a single descriptor. Therefore scores within each sample were standardised to allow for comparison.

Primary measure of treatment outcome

Since overprotection was assessed with parents' self reports, it was considered most appropriate to use clinician ratings as the primary outcome measure. Therefore, the primary treatment outcome for the current study was based on the clinician rating of clinical severity assessed during structured interview.

At least one parent attended an interview to report their child's current anxiety once at the baseline and again at the 6 month follow-up. At both interviews, the

parents(s) completed the Anxiety Disorders Interview Schedule for Children and Parents IV – Parent Version (ADIS-IV-P: Silverman & Albano, 1996), following which the administering clinician assigned a clinician severity rating ranging from 0 to 8, reflecting the severity of the disorder taking into account distress, impairment and interference. A rating of 4 or more indicates that the disorder has reached a clinically significant level. Clinicians from both studies were trained to criterion at the Centre for Emotional Health, Macquarie University. Training involved observations via videotapes and live interviews, as well as completing interviews under supervision. Reliability of diagnoses was established in both studies with inter-rater kappa values for specific anxiety disorders ranging from 0.56 to 1.0. Clinicians administering the interview were blind to knowledge about parent's overprotection ratings.

Additional measure of treatment outcome

As an additional measure of the child's anxiety symptoms, parents in both studies completed the Preschool Anxiety Scale—Revised (PAS-R:Edwards, Rapee, Kennedy, & Spence, 2010), a 28-item report of anxiety symptoms in preschool-aged children. The Cronbach's alphas for the current study were .68 for mothers and .61 for fathers.

Intervention

All families were put through a parent education program consisting several components including psychoeducation about anxiety, parent management strategies such as positive parenting skills and reduction of overprotection, exposure techniques, cognitive restructuring and maintenance and relapse prevention. The program was conducted in groups of up to six parents by final year graduate students in clinical

psychology; each session lasted 90 minutes. Thirty-five families received 8 sessions of the intervention (Kennedy et al., 2009), while 60 families received 6 sessions (Lau et al., 2012). Of these latter 60 families, 39 of them also received an additional social skills training component for the child—a modified version of the Social Skills Facilitated Play Program (Coplan, Schneider, Matheson, & Graham, 2010) targeting skills such as initiating play, communicating to keep friends (sharing likes and dislikes, eye contact), expressing feelings and relaxation.

Results

The return rate of questionnaires at pre-treatment was 91.6% for mothers and 81.1% for fathers. At the 6 month time point, the return rate was 85.2% and 67.4% respectively. Missing data was managed using complete case analysis, where cases with missing data were omitted from the final analysis. Thus the final sample size for the analyses at the 6 month follow-up was 81 mothers and 64 fathers.

Factors associated with initial parent overprotection levels.

Bivariate correlations were conducted between baseline overprotection and baseline measures of symptom severity. Maternal overprotection at baseline was significantly correlated with both the primary and additional measures of symptom severity at baseline—clinician severity ratings r(84)=.309, p < .005 and child anxiety symptoms r(84)= .246, p < .05, while paternal overprotection at baseline was not correlated significantly with the measures of symptom severity at baseline —clinician severity rating r(75)= .101, p = .384 and paternal reported child anxiety symptoms r(75)= .222, p = .051.

Does parental overprotection moderate treatment outcome?

Bivariate correlations were conducted between baseline overprotection and follow-up measures of symptom severity. Results indicated that maternal report of overprotection at pre-treatment significantly correlated with clinician severity rating of anxiety disorders at the 6 month follow-up, r(79) = .423, p < .001, thus higher initial levels of maternal overprotection were associated with higher clinician severity ratings at follow-up. Given the significant relationship between maternal overprotection and clinician ratings of severity at baseline, multiple regression was conducted with maternal overprotection at baseline as a predictor of clinician-rated clinical severity at follow-up, while controlling for baseline clinician-rated severity. Pre-treatment maternal overprotection remained a significant predictor of clinician severity ratings at the 6-month follow up, $R^2 = .30$, F(2, 79) = 17.19, p < .005. In contrast, maternal overprotection at baseline was not significantly correlated with child anxiety symptoms at follow-up, r(79) = .20, p = .074 and after controlling for baseline levels of child anxiety symptoms, maternal overprotection still did not significantly predict child anxiety symptoms $R^2 = .09$, F(2, 78) = 3.85, p = .149. Paternal overprotection was not shown to be significantly correlated with later clinician severity rating, either before, r(70)=.153, p=.195, or after controlling for baseline clinician severity ratings, $R^2=.23$, F(2,70) = 10.64, p = .279. Similarly, paternal overprotection was also not significantly correlated with child anxiety symptoms either before, r(62)=.014, p=.912, or after controlling for baseline levels of child anxiety symptoms, $R^2 = .02$, F(2, 64) = 0.73, p = .922.

Does change in parental overprotection predict treatment outcomes?

Bivariate correlations were conducted between change in maternal overprotection and change in measures of symptom severity from pre-intervention to follow-up. Change in mothers' reports of overprotection from baseline to the 6-month follow-up were not significantly correlated with change in clinician severity ratings, r(73)=.044, p=.706 while the correlation between the change in maternal overprotection and change in child anxiety symptoms was close to traditional levels of significance, but also failed to reach significance r(74)=.222, p=.052. Change in paternal report of overprotection from baseline to follow-up was not significantly correlated with change in clinician severity rating r(61)=-.077. p=.546 or child anxiety symptoms r(62)=.175, p=.163.

Discussion

Prior to receiving the intervention, children who had more severe anxiety were more protected by their mothers. Consistent with the broader literature, maternal overprotection appears to reflect additional risk for the child to experience more severe and recurrent anxiety (Edwards, Rapee, & Kennedy, 2010). While there appeared to be a trend for paternal overprotection to be correlated with paternal reported child anxiety symptoms at baseline, initial levels of paternal overprotection was not shown to significantly increase the child's risk for higher levels of anxiety. This difference between maternal and paternal report may be due to power limitations as fewer fathers returned the questionnaires compared with mothers. Although most etiological models of anxiety do not make the distinction between maternal and paternal overprotection, there has been some evidence suggesting that mothers' overprotection may play a more important role than that of fathers (Bögels & van Melick, 2004). Further, paternal critical control, as opposed to overprotection, has also been found to be more predictive

of child anxiety (McLeod, Wood, & Weisz, 2007; McShane & Hastings, 2009). Whereas some studies have failed to find significant effects for paternal overprotection on childhood anxiety (Hudson & Rapee, 2005; Spokas & Heimberg, 2009), Edwards and colleagues (2010) found evidence for a unidirectional relationship, where paternal overprotection significantly predicted child anxiety. The role of paternal overprotection is still unclear, and invariably low research participation rates from fathers pose a difficulty in further investigating this relationship.

The impact of family relationship variables on the treatment outcome of childhood anxiety has not been widely studied. Some research has shown that family members' accommodation of obsessive compulsive behaviours predicts poorer treatment outcome (Merlo et al., 2009; Storch et al., 2010). Similarly, we found that overprotection from mothers predicted poorer outcome of the intervention as reflected in clinician severity ratings. Importantly, the effect does not simply reflect greater anxiety severity in children at baseline since the relationship remained significant after controlling for baseline clinician severity ratings. As implied by models of the development of anxiety, it is likely that higher levels of maternal overprotection may hold parents back from encouraging their child's exposure to fearful situations (Edwards, Rapee, & Kennedy, 2010; Hudson & Rapee, 2004; Rubin, Coplan, & Bowker, 2009). Thus one mechanism by which maternal overprotection impacts on treatment may be a direct one in which more protective mothers may be less willing to urge their child to engage in exposure to feared cues and thereby encourage their child to avoid potential threat. Since the treatment of early childhood anxiety largely relies on parents to administer and carry out exposure with their child, the impact of parental overprotection may be particularly evident in younger children.

Nevertheless, this finding should be interpreted with caution, as maternal overprotection was found to be associated with only one the primary measure of treatment outcome. The additional outcome measure—maternal reported child anxiety symptoms—was not significantly moderated by baseline maternal overprotection. It is possible that maternal overprotection may reflect an aspect of anxiety that is not tapped by clinician severity ratings and as such, parental overprotection may not moderate anxiety severity but rather may in itself constitute a marker of anxiety severity.

Alternatively, it is possible that different aspects of the child's anxiety are tapped by clinican severity ratings and parent-reported symptoms, only some of which are moderated by mothers' overprotection. Further studies need to be done to explore these and additional possibilities in detail.

Reduction in maternal overprotection from baseline to follow-up correlated moderately with reduction in maternal reported child anxiety symptoms (although the relationship did not quite reach traditional levels of significance). Thus it is possible that with a larger sample, evidence consistent with a mediating role for maternal overprotection may have been found, although of course the direction of effects is not clear. It is possible that with the reduction of maternal overprotection through treatment, mothers view their child as being less "fragile" and anxious and more capable of being independent, and thus rate their child's anxiety symptoms as less severe than previously. Thus, mothers who were more overprotective at baseline had the tendency to reduce their ratings of child anxiety symptoms despite clinician ratings not showing the same trend. This could be suggestive of subtle changes only detectable by primary care takers and not by clinicians. Alternatively, this could suggest that changes in maternal overprotection did not have an impact on the child's anxiety levels but were associated only with a change in maternal perceptions of anxiety symptoms. However, based on

traditionally accepted levels of significance, neither the change in maternal or paternal overprotection from baseline to follow-up was significantly associated with either of the outcomes measured. Thus in the current study we did not find evidence that parental overprotection mediates treatment outcomes. Causal theories of parental overprotection and childhood anxiety suggest that reduction of parental overprotection over treatment should at least partially predict change in child anxiety and an extensive literature supports the close relationship between parental overprotection and childhood anxiety. Thus the lack of a mediating role for parental overprotection is surprising. There are several possible explanations for this. First, although it is possible that the particular treatment used in the current study does not work through the alteration of parental overprotection, a different treatment that alters parental overprotection may prove to be efficacious as well. In other words, there may be several pathways to anxiety reduction. Second, it is possible that the notion of overprotection encompasses a positive aspect of parenting practice such as extra attention and guidance essential for anxious children. This is evidenced by parental overprotection being positively related to social encouragement (Bögels et al., 2001). This lack of differentiation between negative overprotective behaviours and positive attention may have contributed to the lack of significance in this study. Finally, it is also possible that the measure used to determine parental overprotection may lack sensitivity in capturing short term change and that relying solely on parental report of overprotection may not be sufficient. Future studies could include additional measures of overprotection such as the New Friends Vignettes (McShane & Hastings, 2009), which has been reported to have sound psychometric properties for use with parents of preschoolers.

Further, future studies could examine more facets of parental attitudes such as expressed emotion. Inclusion of the Five minute speech sample (FMSS) as a measure of

parental expressed emotion could contribute valuable insight into parental criticism and over-involvement. In study of clinically anxious children, Gar and Hudson (2009) reported significant reductions in the levels of maternal criticism and emotional over-involvement from pre- to post-treatment. As such, the role of parental criticism and over-involvement could also be explored as possible moderating and mediating factors of anxiety treatment outcomes.

Summary

The role of parental overprotection in the development of childhood anxiety is still unclear. Results from the current study support existing literature suggesting that maternal overprotection may confer additional risk for childhood anxiety. While the role of maternal overprotection appears to be relatively consistent, in this study, effects of paternal overprotection on child anxiety were not found, possibly suggesting that maternal overprotection may have a greater bearing on child anxiety. Maternal overprotection was also shown to moderate treatment outcome but only as measured by the clinician severity rating and not by maternal report of children's symptoms. It is possible that mothers who are more overprotective are less likely to encourage their child to engage in exposure, thus undermining treatment. Further studies need to be done in order to determine whether maternal overprotection does indeed moderate treatment outcome or whether it only moderates a specific aspect of treatment outcome such as clinical severity. Contrary to our hypothesis, parental overprotection did not mediate the outcome of treatment measured by either outcome measure. It is likely that this intervention does not work through alteration of parental overprotection; however this does not necessarily rule out the importance of the role of parental overprotection in the reduction of childhood anxiety. It merely suggests that there are other ways by which this intervention achieves reduction in anxiety.

References

- Bayer, J. K., Rapee, R. M., Hiscock, H., Ukoumunne, O. C., Mihalopoulos, C., & Wake,M. (2011). Translational research to prevent internalizing problems in early childhood. *Depression and Anxiety*, 28, 50-57.
- Benjamin, R. S., Costello, E. J., & Warren, M. (1990). Anxiety disorders in a pediatric sample. *Journal of Anxiety Disorders*, 4(4), 293-316.
- Bittner, A., Egger, H. L., Erkanli, A., Costello, E. J., Foley, D. L., & Angold, A. (2007). What do childhood anxiety disorders predict? *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 48(12), 1174-1183.
- Bögels, S. M., & van Melick, M. (2004). The relationship between child-report, parent self-report, and partner report of perceived parental rearing behaviors and anxiety in children and parents. *Personality and Individual Differences*, *37*(8), 1583-1596.
- Bögels, S. M., van Oosten, A., Muris, P., & Smulders, D. (2001). Familial correlates of social anxiety in children and adolescents. *Behaviour Research and Therapy*, 39(3), 273-287.
- Coplan, R. J., Schneider, B. H., Matheson, A., & Graham, A. (2010). 'Play skills' for shy children: Development of a Social Skills Facilitated Play early intervention program for extremely inhibited preschoolers. *Infant & Child Development*, 19(3), 223-237.
- Edwards, S. L., Rapee, R. M., & Kennedy, S. J. (2008). Psychometric properties of a parent-report measure of overprotection of preschool-aged children.

 Unpublished manuscript.

- Edwards, S. L., Rapee, R. M., & Kennedy, S. J. (2010). Prediction of anxiety symptoms in preschool-aged children: examination of maternal and paternal perspectives.

 **Journal of Child Psychology and Psychiatry, 51(3), 313-321.
- Edwards, S. L., Rapee, R. M., Kennedy, S. J., & Spence, S. H. (2010). The Assessment of Anxiety Symptoms in Preschool-Aged Children: The Revised Preschool Anxiety Scale. *Journal of Clinical Child & Adolescent Psychology, 39*(3), 400-409.
- Ford, T., Goodman, R., & Meltzer, H. (2003). The British child and adolescent mental health survey 1999: The prevalence of DSM-IV disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*, 42(10), 1203-1211.
- Gar, N. S., & Hudson, J. L. (2009). Changes in maternal expressed emotion toward clinically anxious children following cognitive behavioral therapy. *Journal of Experimental Child Psychology*, 104(3), 346-352.
- Hudson, J., Doyle, A. M., & Gar, N. (2009). Child and maternal influence on parenting behavior in clinically anxious children. *Journal of Clinical Child & Adolescent Psychology*, 38(2), 256-262.
- Hudson, J., & Rapee, R. M. (2004). From anxious temperament to disorder: An etiological model of generalized anxiety disorder. In R. G. Heimberg, C. L. Turk
 & D. S. Mennin (Eds.), Generalized Anxiety Disorder: Advances in Research and Practice. New York: Guilford Press.
- Hudson, J., & Rapee, R. M. (2005). Parental perceptions of overprotection: Specific to anxious children or shared between siblings? *Behaviour Change*, 22(03), 185-194.
- Kennedy, S. J., Rapee, R. M., & Edwards, S. L. (2009). A selective intervention program for inhibited preschool-aged children of parents with an anxiety

- disorder: Effects on current anxiety disorders and temperament. *Journal of the American Academy of Child & Adolescent Psychiatry*, 48(6), 602-609.
- LaFrenière, P. J., & Dumas, J. E. (1992). A transactional analysis of early childhood anxiety and social withdrawal. *Development and Psychopathology*, 4, 385-402.
- Lau, E. X., & Rapee, R. M. (2011). Prevention of anxiety disorders. *Current Psychiatry Reports*, 13(4), 258-266.
- Lau, E. X., Rapee, R. M., & Coplan, R. J. (2012). A randomized controlled evaluation of the inclusion of a child component to an early intervention for inhibited preschoolers. Unpublished manuscript.
- Manfredi, C., Caselli, G., Rovetto, F., Rebecchi, D., Ruggiero, G. M., Sassaroli, S., & Spada, M. M. (2011). Temperament and parental styles as predictors of ruminative brooding and worry. *Personality and Individual Differences*, 50(2), 186-191.
- McLeod, B. D., Wood, J. J., & Weisz, J. R. (2007). Examining the association between parenting and childhood anxiety: a meta-analysis. *Clinicial Psychology Review*, 27, 155-172.
- McShane, K. E., & Hastings, P. D. (2009). The New Friends Vignettes: Measuring parental psychological control that confers risk for anxious adjustment in preschoolers. *International Journal of Behavioral Development*, 33(6), 481-495.
- Merlo, L. J., Lehmkuhl, H. D., Geffken, G. R., & Storch, E. A. (2009). Decreased family accommodation associated with improved therapy outcome in pediatric obsessive-compulsive disorder. *Journal of Consulting and Clinical Psychology*, 77(2), 355-360.

- Pine, D. S., Cohen, P., Gurley, D., Brook, J., & Ma, Y. (1998). The risk for early-adulthood anxiety and depressive disorders in adolescents with anxiety and depressive disorders. *Archives of General Psychiatry*, 55(1), 56-64.
- 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. (2012). Family factors in the development and management of anxiety disorders. *Clinical Child & Family Psychology Review*, 15(1), 69-80.
- Rapee, R. M., Schniering, C. A., & Hudson, J. L. (2009). Anxiety disorders during childhood and adolescence: Origins and treatment. *Annual Review of Clinical Psychology*, 5(1), 311-341.
- Rubin, K. H., Coplan, R. J., & Bowker, J. C. (2009). Social withdrawal in childhood. *Annual Review of Psychology*, 60(1), 141-171.
- Rubin, K. H., & Mills, R. S. L. (1991). Conceptualizing developmental pathways to internalizing disorders in childhood. *Canadian Journal of Behavioural Science*, 23, 300-317.
- Rubin, K. H., Nelson, L. J., Hastings, P., & Asendorpf, J. (1999). The transaction between parents' perceptions of their children's shyness and their parenting styles. *International Journal of Behavioral Development*, 23(4), 937-957.
- Silverman, W. K., & Albano, A. M. (1996). *The Anxiety Disorders Interview Schedule*for Children-IV (Child and Parent Versions). San Antonio: Psychological

 Corporation.
- Spokas, M., & Heimberg, R. G. (2009). Overprotective parenting, social anxiety, and external locus of control: Cross-sectional and longitudinal relationships.

 *Cognitive Therapy & Research, 33(6), 543-551.

- Storch, E. A., Björgvinsson, T., Riemann, B., Lewin, A. B., Morales, M. J., & Murphy, T. K. (2010). Factors associated with poor response in cognitive-behavioral therapy for pediatric obsessive-compulsive disorder. *Bulletin of the Menninger Clinic*, 74(2), 167-185.
- Strauss, C. C., Frame, C. L., & Forehand, R. (1987). Psychosocial impairment associated with anxiety in children. *Journal of Clinical Child Psychology*, 16(3), 235.

CHAPTER 5

GENERAL DISCUSSION

Overview

Anxiety disorders have been shown to be the most common group of mental disorders in children (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003) and are associated with a wide range of psychosocial problems ranging from family to peer and school difficulties (Ezpeleta, Keeler, Erkanli, Costello, & Angold, 2001). Rejection, victimization, poor friendship quality, academic school difficulties are all examples of negative outcomes related to anxiety at a young age (Rubin, Coplan, & Bowker, 2009). Anxiety disorders in childhood predict not only future anxiety but also other, non-anxiety psychiatric problems (Angold, Costello, & Erkanli, 1999; Lewinsohn, Zinbarg, Seeley, Lewinsohn, & Sack, 1997). Moreover, high levels of comorbidity with depression and disruptive disorders place the child in the vulnerable position of poorer prognosis (Last, Hansen, & Franco, 1997).

Anxiety disorders can be diagnosed in children as young as 2 years of age (e.g. Dadds & Roth, 2008; Mian, Godoy, Briggs-Gowan, & Carter, 2012). Although anxiety treatment interventions are reporting strong efficacies, until such treatment is received, the social impairment and life interference experienced at a young age may stifle the child's social development and lead to further problems along the developmental trajectory. Yet, little attention has been paid to prevention targeted at young children. Thus, an early intervention program targeting young children at high risk for anxiety disorders may potentially be useful in reducing current suffering and a whole host of psychosocial problems associated with later psychopathology.

The primary aim of this thesis was to evaluate an early intervention program that combined parent-education and direct social skills training for anxious preschoolers.

To set the stage for this early intervention program, identification of key issues

pertaining to prevention interventions is necessary. Thus, a review of anxiety prevention programs was first carried out, and is presented in chapter 2. At this point, it is necessary to make clear that there are no benefits to seeing prevention and treatment as different processes because "there are many circumstances under which traditional treatment at one point of development might provide prevention at a later developmental stage" (Rapee, 2008). As such, providing the intervention at an early age may be considered as prevention, while providing the same intervention at a later stage would be considered as treatment. In essence, the difference between prevention and treatment is dependent on which developmental stage the intervention is being offered at. This idea is further supported by Feldner and colleagues (2004), as they discuss that the components of prevention programs capitalize heavily on empirically sound treatments of anxiety disorders.

Following that, an intervention was developed, guided by evidence-based research, to target core anxiety risk factors. A parent workbook was created for the program (Appendix B) to guide parents in their participation and provide information for the other parent, should they be unable to attend. This intervention was then tested, and reported in chapter 3. Finally, parental overprotection was examined as a possible mediator and/or moderator of early intervention for anxiety in young children, and is reported in chapter 4.

Chapter 2: Prevention of Anxiety Disorders

Research in anxiety disorders has seen a recent surge of literature reporting a variety of prevention programs; these have been directed either at broad, non-specific anxiety or at more specific anxiety types, such as panic disorder or post-traumatic stress disorder (PTSD). Chapter 2 of this thesis reviewed the latest research in anxiety

prevention and discussed several key issues pertaining to it, such as the identification of at-risk participants, their motivation for participation, the optimal age for intervention and the level of expertise required to deliver the intervention.

The distinction between prevention and treatment reflects the point at which the intervention is administered—treatment of a disorder at one developmental point could be conceptualized as prevention of disorder further along the developmental stream (Rapee, 2008). This difference has little clinical or practical impact as it is not uncommon for a large proportion of children selected for prevention and early intervention programs based on known risk factors to already meet criteria for an anxiety disorder (Kennedy, Rapee, & Edwards, 2009; Rapee, Kennedy, Ingram, Edwards, & Sweeney, 2005). As such, early intervention may not only prevent future anxiety disorders, but at the same time also offer relief from current interference and suffering.

Findings from universal, selective and indicated prevention programs have shown mixed results in the ability to reduce anxiety symptomology. While about half of the universal interventions have shown small but significant differences in reducing anxiety, others did not demonstrate statistically significant effects (Neil & Christensen, 2009). Selective interventions, on the other hand, showed greater potential to alleviate current anxiety though the ability to reduce risk for future disorders has been less clear. While some have reported successful attempts at reducing risk factors such as anxiety sensitivity (Balle & Tortella-Feliu, 2009) and behavioral inhibition (Kennedy et al., 2009), others have not found the same pattern of reduction in risk (Rapee et al., 2005). This difference could hinge on a variety of reasons, such as severity of risk at pretreatment and age of intervention. At this stage, little is known about factors that moderate and mediate change in risk factors. Further knowledge of these factors is

necessary in order to improve the effects of these selective interventions. Finally, the efficacy of indicated prevention programs has been difficult to establish and few studies have teased apart the treatment effects (reduction in anxiety disorders) from prevention effects (reduction in the number of participants who move from subclinical to clinical range). The overall outcomes of indicated prevention programs have been inconsistent, with some reporting positive treatment effects (Bernstein, Bernat, Victor, & Layne, 2008; Bernstein, Layne, Egan, & Tennison, 2005; Liddle & Macmillan, 2010; Mifsud & Rapee, 2005) and others failing to find a significant group difference (Dadds & Roth, 2008; Hunt, Andrews, Crino, Erskine, & Sakashita, 2009).

Prevention programs targeted specifically at panic disorder showed the ability to achieve significant prevention of panic disorder but without significant effects on key risk factors such as anxiety sensitivity (Gardenswartz & Craske, 2001). On the other hand, early attempts to apply prevention and early intervention in the field of PTSD have shown minimal success in reducing the incidence of PTSD (Resnick, Acierno, Holmes, Kilpatrick, & Jager, 1999). More recently, prevention interventions were trialed at schools where children had been exposed to repeated terrorist attacks, thus placing them at a continued risk for PTSD (Berger, Pat-Horenczyk, & Gelkopf, 2007; Gelkopf & Berger, 2009). Both studies offered preliminary support for such early intervention programs at reducing PTSD-related symptoms and incidence of PTSD. This lays the groundwork for the possible implementation of early intervention programs in schools in which children are at significant risk of high level of threat.

Several key issues surrounding the prevention of anxiety have also been identified. Firstly, accurate identification of at-risk children for targeted programs in a cost-effective manner is crucial. There is also evidence that treatment effect size seems to be larger when children with higher risks are selected. This is probably because those

in the control condition do not show as much spontaneous recovery over time as do those in the control group with fewer risk factors. In other words, with more risk factors, anxiety stays more stable, allowing the effects of intervention to be more clearly shown. As such, suggests that targeted prevention programs should optimally select participants based on as many risk factors as is practical, since prevention effects are stronger when a child has more risk factors. It is important for future prevention programs to utilize parsimonious yet accurate selection tools in order to be widely adopted.

Secondly, motivation for participation in an intervention is crucial for consideration. It appears that motivation to participate is often commensurate with the amount of interference and distress experienced by participants—with universal interventions showing generally lower attendance and compliance rates compared with indicated and selective interventions (Offord, Chmura Kraemer, Kazdin, Jensen, & Harrington, 1998). Material targeting motivation should be included in the intervention. One way to increase motivation could be to spend time discussing the interference of anxiety on the child's life. Making a clear distinction between what the child does not like to do (an introverted child who does not like parties) and what the child wants to do but misses out on due to their anxiety (a child who is excited about going to a party but freezes up upon seeing all the crowd). Helping the parents understand the rationale behind each component of the program can also help to increase adherence and motivation.

Another pertinent issue for anxiety prevention is the age at which the intervention should take place. Early onset of most anxiety disorders puts pressure on prevention programs to intervene early. Due to the plasticity of the child's development during preschool years (Hirshfeld-Becker & Biederman, 2002), this appears to be the optimal time for prevention.

Finally, it is necessary to consider what level of expertise is required of the person delivering the program. Whereas Barrett and Turner (2001) found no significant differences in outcome when comparing psychologist-led and teacher-led interventions, others have failed to find this same result when comparing school counselors, teachers, and nurses (Hunt et al., 2009; Stallard, Simpson, Anderson, & Goddard, 2008). This is an issue of practical importance, as qualification and training of required staff will influence the cost and accessibility of programs, and hence warrants further investigation.

Chapter 3: A Randomized Controlled Evaluation of the Inclusion of a Child Component to an Early Intervention for Inhibited Preschoolers

This chapter described an early intervention program designed for anxious preschoolers and their parents. Families were selected based on the two most widely researched risk factors for anxiety disorders: high levels of child behavioral inhibition and parental emotional negativity. Seventy-two children (38 boys, 34 girls) aged between 36 to 65 months were included in the study and were randomly allocated to either the parent-and-child intervention group, or the 6-month waitlist group. Upon completion of the 6-month waitlist period, the 33 families were offered the parent-education component of the treatment program; 20 of the families went on to receive the parent-education component and were assessed again 6 months after the start of their program.

The recruitment method proved to be highly efficient as although families were selected based on the child's behavioral inhibition and parental emotional negativity, the clinical interviews found that 100% of the children that met criteria for these two risk factors also met criteria for at least one anxiety disorder.

At the 6-month time point, the parent-and-child intervention group was superior to the waitlist group in the total number of anxiety disorders and clinician severity ratings of the child's anxiety. Further, maternal reports of life interference and anxiety symptoms also showed marked differences between the groups, with the parent-andchild intervention group showing significantly superior results. The families in the parent-and-child intervention group were assessed again 6 months later; all gains were maintained. Although the main aim of the current research was to demonstrate that the combined intervention was feasible, providing children on the waitlist with intervention for their parents after the waiting period was not only ethically responsible but also made it possible for a quasi-experimental comparison of the two active interventions. The comparison showed that the addition of a child social skills intervention did not add significant efficacy to parent-education. However, by 6-12 months, the sample sizes were especially small and thus it is likely that there would be insufficient power to detect small differences. Comparisons with an earlier parent-only early intervention trial by Kennedy and colleagues (2009) showed that children offered the combined intervention in this current study showed larger effect sizes on a few of the measures, suggesting that the inclusion of a child social skills component might produce slightly superior results to running the parent-education program alone.

Interestingly, an analysis of attendance rates showed that mothers in the parent-and-child group attended significantly more sessions than mothers in the parent-only group, while fathers in both groups attended a similar number of sessions. This difference in mother's participation did not, however, translate into significantly superior outcomes for the children in the parent-and-child group. Thus, even though it is possible that including the child may motivate mothers to be more conscientious in attending sessions, that did not result in any difference in treatment outcomes. It is

possible that the workbooks issued to parents during the first session of the program (see Appendix B) allowed them to continue delivering active intervention to their child without attending groups. Such a suggestion is consistent with previous studies showing that providing written material to parents of anxious children can lead to reductions in child anxiety (Rapee, Abbott, & Lyneham, 2006). This underlines the importance of having a comprehensive parent workbook that includes examples to aid understanding.

Another interesting point to note is the slow rate of recovery from anxiety disorders. By the 6 month follow-up, only 36.1% of the children lost their anxiety diagnoses. This lower than the rate reported by Kennedy et al., (2009)(46.7%) and Hirshfeld-Becker et al., (2010)(50%). However, by the 12 month follow-up, the rates of children free of any anxiety disorders caught up to 67.6%. One possible explanation for this difference may be that children take more time to practice and internalize the social skills they are taught. It may be worthwhile to include social skills practice tasks as homework tasks and encourage parents to provide opportunities for their child to practice their newly acquired social skills outside of the session.

Further studies in this area could consider having a longer waitlist period.

Considering the strong time effect of most of the outcome measures, a longer waitlist period would indicate whether the combined intervention would continue to show differences further along the developmental path. When it comes to anxiety and shyness in young children, one common notion is "they will grow out of it". Evidence of long term differences between those who received and did not receive early intervention can help to disprove this belief and substantiate the need for early intervention of anxiety in young children. Another way the research could be improved would be to use multiple informants for outcome measures for example by including teacher questionnaires and observational measures (as outcome measures but not selection criteria). Also, it would

be worthwhile including a measure of the child's social skills. Since the child component included social skills training, the inclusion of such a measure may provide additional insight to understand the mechanisms by which the treatment outcomes were achieved and thus inform future treatment protocols.

Several factors lend strength to this study over previous early intervention studies. Firstly, the combined intervention in this study targeted an additional risk factor, social skills deficits. As previous interventions have conventionally only included parent-education, this study further incorporated direct contact with the children to remediate social skills deficits as well as provide an arena for facilitated social interaction. Having the child attend the social skills group also presented parents with additional opportunities for assigning their child exposure tasks—tasks such as "saying hello to the group leader" and "bringing lollies for the other children in the group". This also gave the group leader the chance to witness parents carrying out exposure tasks and reinforce the parents for their behaviors. In some circumstances, group leaders were also able to give parents suggestions on how to better handle difficult situations during exposure. The direct contact with the child also increased face validity. Anecdotally, parents who were offered the parent-only program found it difficult to understand how a program attempting to prevent anxiety in the child did not require the attendance of the child. Although it is tempting to suggest that inclusion of the child in the intervention increased attendance rates, it is just as possible that other factors reduced attendance in the parent-only condition, for example a waning in motivation after waiting 6 months for treatment.

Another factor that differentiated the current study from previous early intervention attempts was the simplicity and elegance of the selection procedure.

Previous studies often used time-consuming and expensive methods of selection such as

clinician administered interviews and laboratory observations (Kennedy et al., 2009; Rapee et al., 2005). These methods often result in higher confidence of risk factor status (such as parent anxiety disorder or child behavioral inhibition), but the high costs and greater resources involved reduce the likelihood of such selection being adopted by public health systems. The selection of participants for the current study relied solely on questionnaire screening, which makes implementation of the program efficient on a large scale.

Overall, this early intervention program that included both a parent-education component and a child social skills program holds great promise for children at-risk of anxiety disorders in alleviating their current suffering and reducing their risk for anxiety disorders further down the developmental track.

Chapter 4: Maternal overprotection as a moderator and mediator of early intervention for anxious children

Chapter 4 of this thesis examined parental overprotection as both a moderator and a mediator of childhood anxiety treatment and early intervention. In order to increase the effects of intervention and treatment of childhood anxiety, a clearer understanding of the influences on treatment is necessary. A combined data set from two separate early intervention programs for anxious preschoolers was analyzed. A total of 81 families across the two studies were included in the analysis, with the children aged between 36 and 65 months. All families engaged in a parent-education intervention, with 39 of them also receiving a child social skills intervention.

The analysis revealed that higher maternal overprotection at baseline significantly predicted poorer treatment outcome as measured by the main outcome measure—clinician severity rating (even after controlling for baseline clinician severity

rating). It is likely that overprotective mothers hold back from encouraging their child's exposure to anxiety provoking situations (Edwards, Rapee, & Kennedy, 2010; Hudson & Rapee, 2004; Rubin et al., 2009), thus impeding treatment. Maternal overprotection, however, did not significantly predict the secondary outcome measure, parent reported anxiety symptoms. This suggests that maternal overprotection only moderates a certain aspect of treatment outcome—one that is only observable by clinicians. Interestingly, results from this current study showed that paternal overprotection did not moderate treatment outcome. Although significant effects of paternal overprotection have been reported previously (Edwards et al., 2010), similar to this study, many others have failed to find a significant relationship between paternal overprotection and child anxiety (Hudson & Rapee, 2005; Spokas & Heimberg, 2009). It is possible that due to lower return rates from fathers, paternal reports did not have enough power to reach significance. It is perhaps more likely that because mothers tend to be the main caregiver and spend more time with the child, overprotection on their part has a greater impact on the child. Although most etiological models of childhood anxiety do not make a distinction between maternal and paternal overprotection, but based on this study's findings, it may be worthwhile to further study the differing impact of maternal and paternal overprotection on child anxiety.

Neither maternal nor paternal overprotection was shown to mediate treatment outcome, suggesting that this intervention did not achieve success through alteration of parental overprotection. It is crucial to note that this finding does not mean that overprotection is unimportant in the etiology and treatment of childhood anxiety; it only suggests that overprotection was not the "active ingredient" in this particular intervention. The delineation of what exactly constitutes overprotection may have also contributed to this finding, in that the notion of overprotection may encompass positive

aspects of parenting practice, such as extra attention and guidance, which are in fact necessary for anxious children (Bögels, van Oosten, Muris, & Smulders, 2001). This overlap of positive attention and overprotection gives rise to practical difficulties in treatment—parents may misunderstand what is required of them to reduce overprotection: instead of learning to hold back and not rescue their child from challenging situations at the first possible instance, they instead mistakenly withdraw concern and take a harsh approach. This confusion may be problematic as parenting styles characterized by lack of warmth have been shown to be associated with anxiety in childhood (Greco & Morris, 2001; Lieb et al., 2000). Thus, the concept of overprotection needs to be better defined and new measures need to be created to help differentiate and clarify the aspects of overprotection.

Implications and future directions

There is increasing evidence suggesting that anxiety disorders are prevalent in children as young as 3 years of age—a finding that received additional support in the current study given that preschool children selected based on risk factors for anxiety disorders already met criteria for at least one anxiety disorder. The high levels reported by parents on the life interference also support the importance of early intervention programs in alleviating current suffering as well as preventing future disorders. Owing to the plasticity of the child's development during these early years, parent-implemented changes are quickly adopted and internalized by the child. What remain unclear are the mechanisms through which these early interventions achieve their success. Overprotection was examined as a factor that may potentially moderate and mediate the intervention effects but the results were inconclusive. Although it appears that maternal overprotection moderates at least one aspect of treatment outcome—

clinician severity ratings—further research is necessary to determine the active ingredients of these intervention programs.

Aside from parental overprotection, another important factor to consider may be poor anxiety regulation skills, which are liable to be passed down from parents to children (Wood, McLeod, Sigman, Hwang, & Chu, 2003). Some parents have the tendency to discuss problems with their child in catastrophic terms and emphasize the child's lack of control and inability to cope with problems (Whaley, Pinto, & Sigman, 1999). In order to address this, the program content was designed to teach parents how to discuss anxieties with their child without over-catastrophizing, such as by working through cognitive restructuring together with their child to help them identify objective evidence for their fears, and through problem solving strategies to encourage the child to be resourceful and think of ways to solve the problem rather than just feel helpless. Further knowledge about the role of anxiety regulation techniques and other active ingredients of the intervention such as graduated exposure would be theoretically important in further understanding the aetiology of anxiety disorders in childhood. On a practical level, this knowledge will also aid in the development of more parsimonious intervention programs to help preschool children.

The positive results from the early intervention program suggest that the next step forward would be the implementation of the program on a wider scale. In order for the program to be adopted by the public health system, the issue of cost would be central. Although the expenditure of running the program is kept down due to the simplicity of the selection method—requiring only online questionnaires—the inclusion of a child social skills program will significantly increase costs, in terms of additional therapists needed to run the sessions and larger venues to run the parent-and-child components concurrently. These costs might be partially offset, though, by the reduced

child-minding needed by parents who can bring their child to the program. A very recent, and so far only, study evaluating the cost-effectiveness of anxiety prevention interventions for children with anxious parents showed that interventions conducted with parents only were as effective as interventions conducted with the child only (Simon, Dirksen, Bögels, & Bodden, 2012); in terms of cost-effectiveness, it was only clear that offering the child either one of the interventions was more cost-effective than not offering them any intervention, but results were inconclusive as to which of the two interventions was more cost-effective. Studies in this vein need to be carried out comparing the combined parent-and-child program with the parent-only program in order to determine whether the additional cost of running the social skills component can be justified by the benefits and disease burden aversion. Results from this current study suggest that only a slight increase in effect size is gained with the inclusion of the child component and hence it is unlikely to justify the additional cost—but this conjecture can only be confirmed by running randomized and controlled cost-effectiveness trials.

The early intervention programs that have been run so far have all rightly targeted the most important people in the young child's life—parents. However, it would also be beneficial for day-care and preschool teachers to receive some form of training to aid them in classroom management strategies. Considering the high prevalence of anxiety in early childhood, it is more than likely that there is at least one anxious child in each class. Thus, educating teachers on how to better recognize and manage anxious behaviors may help with reducing traumatic separations at drop-off and avoidant social behaviors through the day. Parents who attended the program cited examples of their child having never been asked to do "Show and Tell", only to find out that the preschool teacher had removed their child from the roster so that the child

would not be put in that situation and feel discomfort. It appeared obvious to parents after the program that this is not the right way to handle the situation and the avoidance of challenging and feared situations only serves to maintain the child's anxiety. The current parent-education program could be modified quite easily into a teacher-education version and included into the curriculum of early childhood educators, to the benefit of the many children under their care.

Although research on anxiety in young children is still in the early stages, there is increasing evidence suggesting that anxiety disorders affect preschool-aged children and already cause significant life interference for the child and their parents. The efficacy of this brief intervention in alleviating current suffering and reducing risks for future anxiety disorders puts forward a strong case in support of early intervention for anxiety in young children.

References

- Angold, A., Costello, E. J., & Erkanli, A. (1999). Comorbidity. *Journal of Child Psychology and Psychiatry*, 40(1), 57-87.
- Balle, M., & Tortella-Feliu, M. (2009). Efficacy of a brief school-based program for selective prevention of childhood anxiety. *Anxiety, Stress & Coping: An International Journal*, 23(1), 71-85.
- Barrett, P. M., & Turner, C. (2001). Prevention of anxiety symptoms in primary school children: Preliminary results from a universal school-based trial. *British Journal of Clinical Psychology*, 40(4), 399-410.
- Berger, R., Pat-Horenczyk, R., & Gelkopf, M. (2007). School-based intervention for prevention and treatment of elementary-students' terror-related distress in Israel:
 A quasi-randomized controlled trial. *Journal of Traumatic Stress*, 20(4), 541-551.
- Bernstein, G. A., Bernat, D. H., Victor, A. M., & Layne, A. E. (2008). School-based interventions for anxious children: 3-, 6-, and 12-month follow-ups. *Journal of the American Academy of Child & Adolescent Psychiatry*, 47(9), 1039-1047.
- Bernstein, G. A., Layne, A. E., Egan, E. A., & Tennison, D. M. (2005). School-based interventions for anxious children. *Journal of the American Academy of Child & Adolescent Psychiatry*, 44(11), 1118-1127.
- Bögels, S. M., van Oosten, A., Muris, P., & Smulders, D. (2001). Familial correlates of social anxiety in children and adolescents. *Behaviour Research and Therapy*, 39(3), 273-287.

- Costello, E. J., Mustillo, S., Erkanli, A., Keeler, G., & Angold, A. (2003). Prevalence and Development of Psychiatric Disorders in Childhood and Adolescence. *Arch Gen Psychiatry*, 60(8), 837-844.
- Dadds, M., & Roth, J. (2008). Prevention of anxiety disorders: Results of a universal trial with young children. *Journal of Child & Family Studies*, 17(3), 320-335.
- Edwards, S. L., Rapee, R. M., & Kennedy, S. J. (2010). Prediction of anxiety symptoms in preschool-aged children: examination of maternal and paternal perspectives.

 **Journal of Child Psychology and Psychiatry, 51(3), 313-321.
- Ezpeleta, L., Keeler, G., Erkanli, A., Costello, E. J., & Angold, A. (2001).Epidemiology of psychiatric disability in childhood and adolescence. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 42(7), 901-914.
- Gardenswartz, C. A., & Craske, M. G. (2001). Prevention of panic disorder. *Behavior Therapy*, 32, 725-737.
- Gelkopf, M., & Berger, R. (2009). A school-based, teacher-mediated prevention program (ERASE-Stress) for reducing terror-related traumatic reactions in Israeli youth: a quasi-randomized controlled trial. *Journal of Child Psychology* & *Psychiatry*, 50, 962-971.
- Greco, L. A., & Morris, T. L. (2001). Treating childhood shyness and related behavior:

 Empirically evaluated approaches to promote positive social interactions.

 Clinical Child & Family Psychology Review, 4(4), 299-318.
- Hirshfeld-Becker, D. R., & Biederman, J. (2002). Rationale and principles for early intervention with young children at risk for anxiety disorders. *Clinical Child and Family Psychology Review*, 5(3), 161-172.
- Hirshfeld-Becker, D. R., Masek, B., Henin, A., Blakely, L. R., Pollock-Wurman, R., McQuade, J., . . . Biederman, J. (2010). Cognitive behavioral therapy for 4- to 7-

- year-old children with anxiety disorders: A randomized clinical trial. *Journal of Consulting and Clinical Psychology*, 78(4), 498-510.
- Hudson, J., & Rapee, R. M. (2004). From anxious temperament to disorder: An etiological model of generalized anxiety disorder. In R. G. Heimberg, C. L. Turk
 & D. S. Mennin (Eds.), Generalized Anxiety Disorder: Advances in Research and Practice. New York: Guilford Press.
- Hudson, J., & Rapee, R. M. (2005). Parental perceptions of overprotection: Specific to anxious children or shared between siblings? *Behaviour Change*, 22(03), 185-194.
- Hunt, C., Andrews, G., Crino, R., Erskine, A., & Sakashita, C. (2009). Randomized controlled trial of an early intervention programme for adolescent anxiety disorders. *Australian & New Zealand Journal of Psychiatry*, 43(4), 300-304.
- Kennedy, S. J., Rapee, R. M., & Edwards, S. L. (2009). A selective intervention program for inhibited preschool-aged children of parents with an anxiety disorder: Effects on current anxiety disorders and temperament. *Journal of the American Academy of Child & Adolescent Psychiatry*, 48(6), 602-609.
- Last, C. G., Hansen, C., & Franco, N. (1997). Anxious children in adulthood: A prospective study of adjustment. *Journal of the American Academy of Child & Adolescent Psychiatry*, 36, 645-652.
- Lewinsohn, P. M., Zinbarg, R., Seeley, J. R., Lewinsohn, M., & Sack, W. H. (1997).

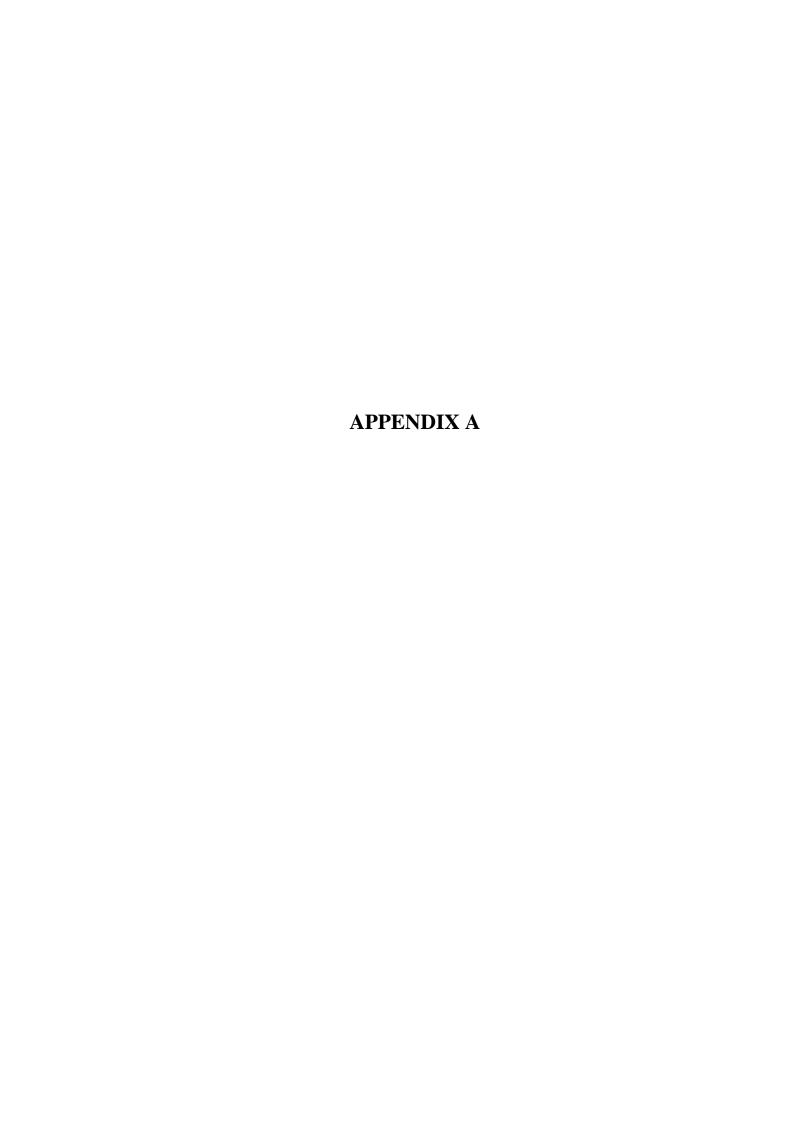
 Lifetime comorbidity among anxiety disorders and between anxiety disorders and other mental disorders in adolescents. *Journal of Anxiety Disorders*, 11(4), 377-394.
- Liddle, I., & Macmillan, S. (2010). Evaluating the FRIENDS programme in a Scottish setting. *Educational Psychology in Practice*, 26, 53–67.

- Lieb, R., Wittchen, H. U., Hofler, M., Fuetsch, M., Stein, M. B., & Merikangas, K. R. (2000). Parental psychopathology, parenting styles, and the risk of social phobia in offspring. *Archives of General Psychiatry*, *57*, 859–866.
- Mian, N. D., Godoy, L., Briggs-Gowan, M. J., & Carter, A. S. (2012). Patterns of anxiety symptoms in toddlers and preschool-age children: Evidence of early differentiation. *Journal of Anxiety Disorders*, 26(1), 102-110.
- Mifsud, C., & Rapee, R. M. (2005). Early intervention for childhood anxiety in a school setting: Outcomes for an economically disadvantaged population. *Journal of the American Academy of Child & Adolescent Psychiatry*, 44, 996-1004.
- Neil, A. L., & Christensen, H. (2009). Efficacy and effectiveness of school-based prevention and early intervention programs for anxiety. *Clinical Psychology Review*, 29(3), 208-215.
- Offord, D. R., Chmura Kraemer, H., Kazdin, A. E., Jensen, P. S., & Harrington, R. (1998). Lowering the burden of suffering from child psychiatric disorder: Tradeoffs among clinical, targeted, and universal interventions. *Journal of American Academy of Child and Adolescent Psychiatry*, 37, 686-694.
- Rapee, R. M. (2008). Prevention of mental disorders: promises, limitations, and barriers.

 Cognitive and Behavioral Practice, 15, 47-52.
- Rapee, R. M., Abbott, M., & Lyneham, H. (2006). Bibliotherapy for children with anxiety disorders using written material for parents: A randomized controlled trial. *Journal of Consulting & Clinical Psychology*, 74, 436-444.
- Rapee, R. M., Kennedy, S. J., Ingram, M., Edwards, S., & Sweeney, L. (2005).
 Prevention and early intervention of anxiety disorders in inhibited preschool children. *Journal of Consulting and Clinical Psychology*, 73, 488-497.

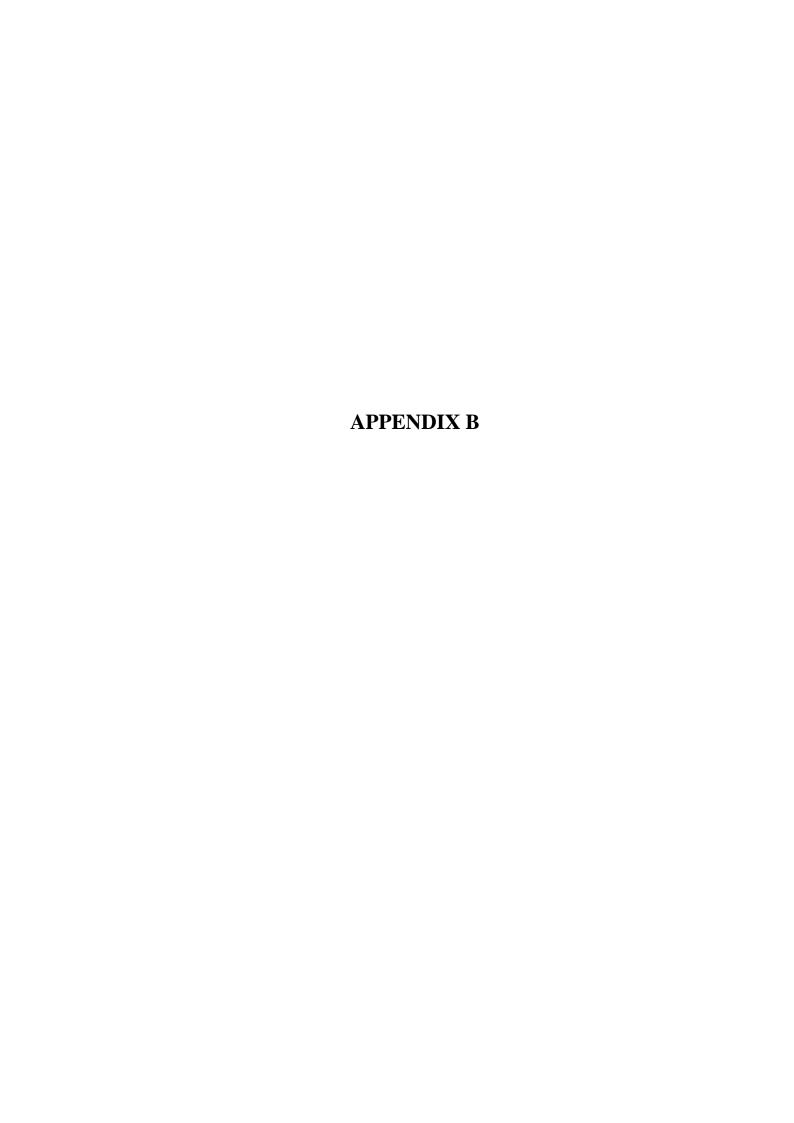
- Resnick, H., Acierno, R., Holmes, M., Kilpatrick, D. G., & Jager, N. (1999). Prevention of post-rape psychopathology: preliminary findings of a controlled acute rape treatment study. *Journal of Anxiety Disorders*, *13*, 359-370.
- Rubin, K. H., Coplan, R. J., & Bowker, J. C. (2009). Social withdrawal in childhood. *Annual Review of Psychology*, 60(1), 141-171.
- Simon, E., Dirksen, C., Bögels, S., & Bodden, D. (2012). Cost-effectiveness of child-focused and parent-focused interventions in a child anxiety prevention program. *Journal of Anxiety Disorders*, 26(2), 287-296.
- Spokas, M., & Heimberg, R. G. (2009). Overprotective parenting, social anxiety, and external locus of control: Cross-sectional and longitudinal relationships.

 *Cognitive Therapy & Research, 33(6), 543-551.
- Stallard, P., Simpson, N., Anderson, S., & Goddard, M. (2008). The FRIENDS emotional health prevention programme: 12 month follow-up of a universal UK school based trial. *European Child & Adolescent Psychiatry*, 17(5), 283-289.
- Whaley, S. E., Pinto, A., & Sigman, M. (1999). Characterizing interactions between anxious mothers and their children. *Journal of Consulting and Clinical Psychology*, 67, 826–836.
- Wood, J. J., McLeod, B. D., Sigman, M., Hwang, W.-C., & Chu, B. C. (2003).
 Parenting and childhood anxiety: theory, empirical findings, and future
 directions. *Journal of Child Psychology and Psychiatry*, 44(1), 134-151.



Due to copyright restrictions, the following articles have been omitted from Appendix A of the thesis. Please refer to the following citations for details.

Lau, Elizabeth X and Rapee, Ronald M. (2011) 'Prevention of Anxiety Disorders' *Current Psychiatry Reports*, Volume 13, Issue 4, pp 258-266



Gool Little

Kids



Parent Workbook

Elizabeth Lau & Ron Rapee

Centre of Emotional Health, Macquarie University
Based on the book 'Helping Your Anxious Child' by Ron Rapee, Ann Wignall, Susan Spence,
Vanessa Cobham and Heidi Lyneham (2008)

Session one

This workbook belongs to:	
Our child's name is:	
The five remaining session dates are:	
Session Two:	
Session Three:	
Session Four:	
Session Five:	
Session Six:	

Note: To get the most from this program, it is best if two parents who are most heavily involved in the child's upbringing can attend all sessions. If it is not possible for both parents to attend, at least one parent (the main caregiver) should attend all sessions.

Welcome

Welcome to the *Cool Little Kids* program. You are here today because you have a preschool-aged child who is a little more shy, quiet or sensitive than most other kids his or her age. As you will learn, this is not a "sickness" or even a "problem" but it does mean that your child <u>might</u> have more difficulties than other kids as s/he is growing up. The *Cool Little Kids* program will help you to learn how you can help your child build his or her confidence. You will learn a number of skills and exercises to help increase confidence. Naturally, the harder you work and the more you practice, the better will be the results.

What your child will be doing.....

While you are learning how to help your child, we will also be working directly with your child to teach him/her some new skills. The children will be working together in a group so that they can learn better ways of mixing with other children in a relaxed setting.

In today's session, your child will learn how to:

Meet and play with a new friend

Shy children often feel nervous in social situations and may freeze or avoid social contact.

Today, the children will learn skills on how to meet other children.

- They will learn how to introduce themselves by name, for example "Hi, my name is George. Would you like to play with blocks?"
- They will also learn how to ask someone to play.
- There will also be free play time to let the children have fun and practice the skill they have just learned.

Shyness and Anxiety in preschool children

- Shy or "inhibited" children act in a number of common ways. These can include:
 - Not wanting to play or mix with other children
 - Clinging or staying very close to parents
 - Crying or getting upset in new situations
 - Not talking or being very quiet with people they don't know
 - Not wanting to try anything new or different
 - Not making eye contact, not smiling much or looking very tense when mixing with people they don't know
- Inhibited children will usually be very different in situations where they feel comfortable such as their home.
- Inhibited behaviours will often be seen in social situations (such as meeting a new person) but might also be seen in physical situations (such as climbing a tree, or seeing a new dog).
- Shyness in preschoolers is quite common. Studies show that 10-15% of young children show high shyness or "inhibited" behaviour.
- Having an inhibited child does not mean they will have problems in the future. Many shy children simply grow out of it. However, some do not. Later difficulties are more common among inhibited children.
- Children who are very shy and inhibited can miss out on important experiences such as making friends, learning new play skills, learning how to do new tasks, and developing confidence and the ability to do things for themself. Very shy and socially withdrawn children tend to be less self-confident. Those shy children, who don't grow out of it, can develop less self-confidence and more dependency over time and are more likely to develop later anxiety problems.

What is anxiety?

Anxiety is a natural and normal emotion that exists in everyone. Anxiety is important for our wellbeing - without it, we would probably die. Anxiety helps us to escape danger when we need to, whether this is a real physical danger or a social threat.



PHYSICAL DANGER

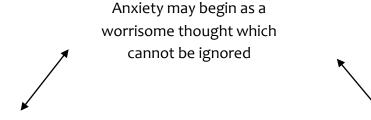
Person in house smells smoke Anxiety/ Fear Person runs out of the house

SOCIAL THREAT

Adult forgets the question he feels embarrassed Makes excuse and was going to ask a group sits down

- In both these examples, anxiety is protecting the person. Anxiety, shyness, and inhibition only become problems when they become a common habit and happen too easily, too often, and in unneeded situations.
- Everyone gets anxious and fearful. Children who are very shy and inhibited may become anxious more easily, more often, and more strongly. However, the basic emotion of anxiety is the same for these children as for everyone else. Anyone can benefit from learning to manage his or her anxiety. Children who are inhibited are likely to have more difficulties than others and so it is important for their future to learn how to manage anxiety well.
- There are 3 parts to anxiety:





Physical Symptoms

This includes increases in heart rate, muscles becoming tense and increases in mental alertness.

These changes prepare the body for action.



Behaviours

An urge to run away, withdraw, avoid, or sometimes lash out.



What are the different types of anxiety?

There are many "types" of anxiety problems. Preschool children might already show some of these, but they become more common as children get older. Some of the most common ones are:

Specific phobias:

Children with specific phobias are afraid of a particular situation or object and usually try very hard to avoid contact with it. Some common types of phobias include: the dark, water, heights, dogs, and thunderstorms.

Separation Anxiety:

Children with separation anxiety are frightened of being away from a main caregiver, most commonly, their mother. These children may also fear that something terrible will happen to the parent or child while they are apart. They often don't like to go to daycare or school, won't go on sleepovers and don't like their parents to go out.

Generalized Anxiety

Generalised anxiety can occur in preschool children but is more common in older children who worry a lot about many areas of life. These children are often described as "worrywarts". They may worry about how well they are doing at school or sport, bills, health, friends and new situations. These children often overwhelm their parents with "what if" questions and need to seek reassurance constantly.

Social Phobia

Children with social phobia worry in situations where they have to mix with other people or be the focus of attention. They are commonly very shy and they worry that other people might think badly of them. They are often very self-conscious. Some common situations they might avoid include meeting new kids, going to parties, or speaking up in groups.

Some other types of anxiety problems include Obsessive Compulsive Disorder, Post Traumatic Stress Disorder, or Panic Disorder, but these are more commonly seen in older children.

Parent Activity: My Child's Anxiety

Which of these are problem areas for my child?

When does anxiety become a problem?

Anxiety becomes a problem when it starts to interfere with or cause difficulties for your child. It may mean that it causes your child to feel upset or distressed, or stops your child from doing things that he or she might like to do such as going to parties or going swimming. Anxiety also becomes a problem when it interferes with important parts of growing up such as making friends, learning their best or playing sport.

How does anxiety affect children?

Anxious children tend to have fewer friends than other children their age. Many anxious children delay homework and struggle with their lessons not because they can't do it but because their worry stops them. Anxious children may also do worse than they should in exams because their worry stops them from being able to concentrate.

As we said before, many inhibited children will change as they grow and mature. However, they are more likely than other children to develop into anxious or depressed adults. Anxiety and depression in adulthood can be serious problems. Anxious and depressed adults are more likely to abuse drugs and alcohol, miss work or be unemployed, or go to the doctor with physical problems.

An important reason for building your child's confidence now is to reduce the chances that s/he will have problems with anxiety or depression in the future.

How does a child become anxious?

As we have mentioned before, not all inhibited children will go on to have anxiety problems. This can give us some hints about the sorts of things we can do to prevent inhibited children from developing problems. There are several things that may lead to shy and anxious behaviours in preschool children:

Genes:

While there is probably not one shy, inhibited, or anxious gene, very shy preschoolers are often described as irritable and easily upset as babies, and as more emotional, intense, and afraid of new situations by 2 years of age. Genes are probably important in how generally sensitive or emotional a person is. We also often find that one or both parents of inhibited children say that they, themselves, tend to be sensitive.

Avoidance:

The key ingredient in an inhibited child is avoidance. Inhibited children try to avoid anything that they think will be the least bit difficult or scary. If they are allowed to avoid these things, they never learn that they actually can cope. In this way shyness and anxiety can lead to more shyness and anxiety in the future.

Modelling:

All children learn from watching those around them - parents, grandparents, relatives, and playmates. This learning from watching others is what we call "modelling". Preschool children who have a parent who is also anxious are more likely to show shy and inhibited behaviours. This may be due to shared genes, but is also likely to involve copying or modelling of the parent by the child. Children gather information from watching how their parents react to situations. Often one parent is anxious and the child will pick up on this, no matter how hard the parent tries to hide it. The child watches and learns.

■ Early Experiences:

Children who are very shy and inhibited are more likely to believe that the world is not a safe place or that it is easy to get hurt. Stressful events and early experiences that the child goes through may increase their sensitivity. This may include such things as separation or divorce in the parents, an accident or illness, or even a specific event such as being bitten by a dog.



Parenting Reaction:

Watching your child feel upset is the hardest thing a parent can do. So in many cases, parents of shy children may try harder to protect them from life's stressors. Parents trying to protect their children may accidentally help them to believe – that life is dangerous and there is nothing I can do to help myself.

Friendship Difficulties

As we have said before, inhibited children might sometimes find it hard to mix with other children. They may have poor social skills and may avoid mixing with others. This can sometimes lead to later social problems such as poor assertiveness, problems with teasing and bullying, and loneliness.

Parent Activity: Factors Contributing to My Child's Anxiety

Genes (anyone else in the family has anxiety/depression?)	
Avoidance (what does your child avoid doing because s/he is anxious?)	
Modelling (what are you afraid/ or worry about of that your child might have picked up?)	
Early Experiences (Did anything happen to your child at a young age?)	
Parenting Reactions (What do you allow your child to avoid or not do because they are afraid, or because you are afraid?)	
Friendship difficulties (Does your child have friendship difficulties? What leads to that?)	

Avoid blaming yourself! No one gets it all right! And it's definitely not too late to make some changes now!



The Cool Little Kids Program

From the information above you might start to get an idea of the sorts of things that your child will need to know to build their confidence. There are some things we can't change, like their genes. But there are plenty of things we can work on and this is what you will learn over the next few weeks.

- 1. Avoidance: The key to this program (and the coming years) will be to reduce your child's avoidance. In a gradual and gentle way, you will learn to encourage your child to begin to face his or her fears. In this way, s/he will learn that "It isn't so bad and I can cope".
- 2. Parent reaction: In a similar way, you will learn to identify when you might be stepping in for your child a bit too quickly and how you can hold yourself back. By gradually giving your child more and more independence, s/he will learn even more that "I can do it".
- 3. We will also talk to you about ways in which you might begin to reduce any anxiety that you might have. By learning these skills yourself, you will be in a better position to teach them to your child over the coming years.
- 4. Finally, your child will also be learning better ways of mixing with other children. This will involve teaching them skills like good eye contact, talking to others, turn-taking, and so on. By letting you know what we are teaching, you will be able to strengthen and continue these skills in their everyday life.

Parent Activity: Goals Setting

What would you like them to be able to do (which they currently are unable to do)? E.g. greet people when they say hello, join in a group of new kids.
What would you like them not to do? E.g. ask reassurance questions, avoiding going to preschool.

Practice tasks

- 1. Fill out daily sheet: Anxiety awareness form.
- 2. Add more goals onto the goal sheet.
- 3. Ask my child what s/he can say if s/he wants to play with someone. Also try to notice any opportunities that come along to encourage my child to go up to another child and ask to play.



Practice Task 1: Anxiety Awareness Record Form

When is my child anxious?

What do they usually say or ask? (e.g. Do they cry, Ask lots of questions, Just simply refuse to move)	What don't they do because of this worry? (e.g. They miss out on preschool, They don't go to a party, They don't play with other kids)	What do they think will happen? (e.g. they think that people will laugh at them, they think they will get sick, they think it will hurt)
	(e.g. Do they cry, Ask lots of questions, Just simply refuse to	(e.g. Do they cry, Ask lots of questions, Just simply refuse to move) this worry? (e.g. They miss out on preschool, They don't go to a party, They



Session two

In today's session, your child will learn to:

Communicate in order to keep friends:

- Kids will be encouraged to say nice things about each other
- They will also be encouraged to share likes, dislikes and interests.

Let's review the Anxiety Awareness Form.

My child does that too!!!

x				
×				
× _				
× _				
× _				
×				

Unhelpful ways of Dealing with Anxiety in Children

While there are no right or wrong ways to handle a child and every child is different, there are some ways that parents might react to their child's anxiety that might help to keep the anxiety going or even increase it in the longer term.

Helping and Protecting your Child:

Imagine the following scene: At a children's show the compare calls the kids forward to come and get a small gift on stage. All the children run up, except one. This child seems frozen with fear. The father of the child, knowing that his child is shy and scared, rushes onto the stage, gets a gift and gives it to the child before the child has a chance to become too upset. What has the child learned from this experience?

The child has not had a chance to learn that she or he can do it. Instead, they have learned that Dad will always help me. S/he may have also learned, "I can't do it myself".

What should the father have done? Unfortunately, there is no "right" answer. We are definitely not saying that he should have sat there and let the child cry and cry. But perhaps he could have waited a little longer before rushing onto the stage. Or maybe he could have tried to encourage his child to go up by him or herself. Or maybe he could have tried to encourage his child to go on stage with him.

Children who are shy and inhibited have often been this way all of their life. So parents have spent several years watching their child get upset, cry, or get frightened. So any parent who loves their child very much will naturally want to protect them from these bad feelings. Over the years, you may have learned to keep your child away from stressful situations or to take over for them and help them before they get upset. In the short term, this is great – your child doesn't get upset and everyone is happy. But in the long term, your child is never learning that the situation is actually not too bad and that s/he can do it.

Even though it can be very painful, it is important that you do not do too much for your child. Children have to experience that situation him or herself in order to learn that the situation is not dangerous and that they can cope.

Think about it: If your child tries to scoop some hot soup, you would quickly step in and take over. The reason is because you DO think that this situation is dangerous and you feel your child is not capable of doing it without hurting herself. The child learns from this that the situation is dangerous and s/he should not try to do it without Mum's help because she cannot handle it. In this situation, that is exactly what Mum



wants the child to learn. However, can you imagine what the child learns when you step in too early and rescue her from a social situation? She also learns that it is dangerous and that she cannot manage it by him or herself.

Allowing Avoidance:

Anxious children avoid a lot of activities and allowing them to skip and avoid these activities will stop your child from becoming upset, but only in the short run. In the long run, they will not overcome their anxiety because they are not given the chance to learn that they can cope with the situation. This means that by allowing your child to not do the things that he is afraid of, he continues to be afraid of them. An example might be if your child is afraid of being left with a babysitter so you and your partner stop going out. In the short run, your child doesn't become upset. But in the long run your child never learns that staying with a babysitter is not as scary as they thought it was.

Becoming Impatient with your child:

Inhibited children can be very frustrating! They often stop us doing what we want, they take a lot of time and effort, and they often seem to get their way. So it is all too easy to become impatient and angry with an anxious child. However, becoming angry with your child will only make him more frightened and dependent. It can sometimes help to remind yourself that you are asking your child to do something extremely frightening. Imagine yourself walking into a biker's party and asking them to turn the music down. Now imagine your partner yelling at you to hurry up and just do it. If you feel yourself losing patience, it is helpful to ask another person to help, or to leave the situation for a short while to gather your thoughts.

Letting your own anxieties get in the way:

Every adult has their own fears, worries and anxieties. As we discussed last week, parents of inhibited children sometimes share some of their child's fears. If this is true for you, you need to try not to let your own anxieties get in the way of helping your child. Imagine that you are afraid of the dentist. Now imagine that your child doesn't want to go to the dentist. You could probably really understand how your child is feeling and this may lead you to allow your child not go to the dentist. You need to take a step back and think about it again. Is going to the dentist frightening for everyone? If you could, would you rather not be anxious about going to the dentist? It takes a lot more effort to help your child overcome a fear that you have as well. This does not mean you can't do it - it just means that you need to be aware of your own fears and worries so they don't get in the way of helping your child become braver.



BUILDING BRAVE BEHAVIOURS

Attention:

The most powerful reward for young children is a parent's attention. The basic rule is that *PAYING*ATTENTION to a behaviour *INCREASES IT, REMOVING ATTENTION* from a behaviour *REDUCES IT*. This means that when your child is acting worried or frightened, you need to pay as little attention as possible. This does not mean to ignore it! But you should try and deal with it calmly and quickly and not make a big fuss.

Then you need to make a big fuss and pay lots of attention to your child when s/he behaves bravely.

Rewards:

All parents know that there are many other rewards you can use in addition to your attention. But there are some basic rules to help rewards work. Rewards should be given as soon as possible after children show good and brave behaviour. Then children will want to do the behaviour again! There is not much point giving a reward a week after the child was brave. You also need to make sure that any reward you give is the right size – rewards need to be small for small steps and bigger when the child does something really good.

Rewards also need to be suited to the child. Every child likes different things, so it is important they you work out the particular things that work best for your child. You will also need to change rewards around – the same reward given over and over again, soon loses its power. Rewards also don't have to be money or sweets – there are many types of rewards. Rewards can take the form of material things (a stamp on the hand), activities (going to the park), attention (playing with Dad), or praise ("well done for doing..."). Finally, it is quite easy to remember to reward or praise your child when they have done something brave or good. But don't forget to also reward your child when they stop doing something "bad"!

Imagine your child worries at bed time and asks many questions before going to bed. If he manages to go to bed without any worried questions, it is important to reward him the next morning, because he <u>did not</u> ask the anxious questions!

Praise:

This is a very powerful form of attention. It is important to give regular praise to children - to reward non-anxious and brave behaviours. When your child is praised, they are motivated to continue that good behaviour!

Consistency:

When you decide to reward your child (or punish them), it is important to try and be as consistent as possible. This means that if you decide to reward your child for something they do, you need to try and reward the same thing every time (at least for a while). Similarly, it is important that as much as possible you and your partner agree and also reward and punish the same things. Children don't learn well when parents use empty threats, use instructions that are unclear or accidently reward a child for being naughty.

■ Try to avoid helping your child too quickly:

A good way to build up your child's confidence is to allow your child to discover more and more of the world for him or herself, rather than stepping in and taking over too quickly. Children need to learn that they have control over the world and this sometimes means letting them make their own mistakes as long as they are not in real, physical danger. This is a very difficult decision for a parent, especially if that parent is a little anxious themself. Learning to ask yourself the following two questions might help. As soon as you feel the urge to go and help your child, you should ask yourself; "What will really happen to x if I don't rush over right this instant?" and then "Can x cope with this situation for even a few more seconds?".

When you eventually do help your child, it is important to try and help them as little as possible. Try and help them to do the task or deal with the situation, rather than doing it for them. Help them a little bit and then step back and see how they go before you help any more. If they are able to do even some of it, you then need to heap them with praise and maybe even give them a reward. If they eventually can't do it and you end up having to do it for them, it is important that they get the message from you that you are confident that they will be able to do it next time.

Modelling:

Children learn by observing. This is often not very obvious, and you may not realise that your child is watching and taking note. Children pick up their parent's anxieties by watching and learning. So children are often afraid of the same things that their parents are afraid of. In the same way, a child can learn if their parent acts in brave and confident ways. If you or your partner have lots of fears, worries, or anxiety, it is important that



you work on these for yourself and try to overcome them. You can then show your child how to act in brave and confident ways.

Keeping feelings in check:

Generally, parenting becomes less successful when we are very emotional (e.g., angry, anxious etc.). This is because we are less consistent at such times. If you find yourself getting angry or frustrated with your child, see if you can try and step back just for a second, and try and regather your thoughts. If it is possible see if there is some way you can leave the situation for a little while – if your partner is around maybe see if they can take over for a while. Otherwise, you might be able to find an excuse to leave the room for a few seconds or minutes to gather your thoughts.

Parent Activity: Replacing Unhelpful Strategies

Unhelpful Strategy	What worries/behaviours prompt this strategy?	What helpful strategy can I use to replace this?
Over-protection		
Letting your own anxiety get into the way		
Permitting/Encouraging avoidance		
Becoming impatient		

What are some rewards your child would like to receive? (Try and think of different types of rewards (eg material, time, attention)

1.	6.				
2.	7.				
3.	8.				
4.	9.				
5.	10.				
3 non-anxious behaviours that I can praise ar	nd reward:				
1.					
2.					
3.					

Practice tasks

- 1. Fill out daily sheet: Jumping in too soon
- 2. Encourage your child to say nice things to brother/sisters and friends. Also, try to notice any times that come along to encourage your child to share likes, dislikes and interests with friends or other kids.



Jumping in too soon

Over the next week, keep a record of any situations or times when your child became upset or worried and you helped your child in some way (eg took them out of the situation, did it for them, showed them what to do, gave them instructions, etc). Also record any things that you allowed your child not to do or that you did for them so that they did not get upset.

Date	Situation or activity that I helped with or did for my child because they worry about it.	What did I do? (Permit avoidance, do it for them, encourage them to do it)	How did my child feel or act when I did this?	What might my child have learned because I did this?



Session three

In today's session, your child will learn:

- The importance of eye contact
- How to maintain appropriate eye contact during conversation

Review: Jumping in too soon
What did I learn?

×						
×			,			
×						
×						
×	 	 	 			
×						

Fighting fear by facing fear: the principles of exposure

WHAT IS EXPOSURE?

- Exposure is the <u>key</u> technique in overcoming fear. This is the main strategy you will need to use with your child for the coming weeks and into the coming years. Behind the technique is one simple idea -*YOU NEED TO FACE FEAR TO OVERCOME FEAR*. The term 'exposure' simply means to gradually confront the things one is afraid of.
- The basic idea behind exposure is that your child needs to face fear, and stay 'long enough' in the feared situation to learn that nothing bad will happen to them. Very shy, inhibited and/or anxious kids avoid certain situations, because they believe something bad will happen to them (e.g., not wanting to talk to other children because they think others won't like them). In doing so, they never put the feared situation truly to the test, and never give themselves the opportunity of learning that nothing bad will happen to them in that situation and that they can cope with whatever does happen. By doing exposure, children are reversing their tendency to avoid.
- The same basic principle applies to all of the different sorts of fears your child may have, whether they are based on social situations such as answering questions at pre-school or meeting new children, or on physical fears such as the dark or being separated from a parent.

THE KEY RULES FOR EXPOSURE

Exposure is a common-sense approach. You may have already tried something like this to help your child.

But the key to exposure is doing it in a very organised and logical way and we find that most parents have not done it like this. The following are the main rules if you want exposure to work:

Fears are faced gradually, working from smaller fears through to bigger fears.

You need to start by drawing up a stepladder for your child for each of their fears. This stepladder breaks the fear down into small steps and starts with easier steps at the bottom and gradually harder steps as they go up the ladder. Each situation is given a fear rating (0 = no fear/anxiety ----- 5 = maximum fear/anxiety). Situations that are quite easy for your child are done first. Then when the child feels comfortable, they are ready to try the next step. Sometimes they may have to try a step several times before they are ready to move on. This is repeated with the next step on the list, and so on until the top step of the stepladder is tackled.



The child must stay in the feared situation for 'long enough'.

It is impossible to say exactly what 'long enough' means. Every child is different and every situation is different. Usually, it is best if the child can stay in the situation until they are no longer scared. However, this is not always practical. The most important thing is that they stay long enough to learn that 'nothing bad happened'. The longer they can stay in the situation, the better.

Repeat each step.

This is an important rule to be observed. Your child should do each step over and over again. Simply doing a step once will not stop them being scared. Ideally, it should get to the stage where your child says "I don't want to do it because I am bored", not because they are scared!

Progress will NOT be smooth.

Even though the theory is easy, progress is often up and down. There will be good days and bad days. The main thing is to encourage your child to do the best that they can on any given day, and keep trying. On bad days, it is probably better not to attempt big steps on the fears list, but instead to repeat a lower step on the list. With practice, your child should eventually be able to do on a bad day, what they can only do now on a good day!

Beware of subtle avoidance and distractions.

When children are scared of something, they have all sorts of little tricks to help them deal with it. For example, they might carry a lucky charm or special toy, stand in a particular position, distract themself (e.g., play on a game or listen to music), or even use a particular ritual (e.g., counting to magic numbers, or twisting their hair a particular way). You need to watch out for these types of things in your child when s/he is doing their stepladders. To properly overcome fear, the child must fully experience the feared situation, and not be distracted from it. It is also important that your child does not have 'an excuse' for improvement (e.g., "I wasn't scared that time because Dolly was with me"). The goal is to have your child be able to face a previously feared situation without fear because they don't see the situation as fearful or dangerous anymore! It is important to point out that you don't have to take their special doll or toy away from them from the beginning. But doing the step without their special toy might have to be part of the stepladder, maybe as a later step.

Using rewards properly.

In the last session we discussed ways that you can encourage children to do more of the behaviours you want them to do. These include giving rewards, paying attention, and giving lots of praise. It will be very important that you use these strategies when you ask your child to try stepladders. You need to remember that children are not like adults – they don't understand why they have to do "nasty things" to become more confident. Therefore, each step that your child tries should be connected with a reward. As we discussed last session, some basic rules of giving rewards are to make sure the rewards are the right size for the step, to make sure the reward is given as soon as possible after your child has completed the step, and to make sure you do what you promised (i.e. if your child tries their step, they should get the reward, but if they back out, the reward should not be given).

It is important to point out that the reward is NOT a bribe. Bribes are used to get someone to do something that is for you. The reward is used to increase the child's motivation to do something which will be useful for him/her and to recognise a job well done.

Parent Activity: My child's fear list

MY CHILD'S FEARS	FEAR RATING			
(Situations that my child avoids or fears)	(o=no fear - 5 = maximum fear			
1.	()			
2.	()			
<u>3.</u>	()			
<u>4.</u>	()			
<u>5.</u>	()			
<u>6</u> .	()			
7.	()			
8	()			



Examples of Stepladders

Goal: To be able to stay at home with a sitter without worrying about Mum being out.						
	Step	Fear (0 -5)	Reward			
1	Stay home with Dad while Mum goes out for ten minutes.	2	Extra 10 mins TV time			
2	Stay home with Grandma while Mum goes out for thirty minutes.	3	A bar of chocolate			
3	Stay home with Dad while Mum goes out for the afternoon.	3	Mum brings back a surprise			
4	Stay home with Grandma while Mum goes out for the day.	4	A bag of candy			
5	Stay home with sitter while Mum goes out for a few hours.	5	Extra bedtime story			
6	Stay home with sitter while Mum goes out for the afternoon.	6	Family to play a game of his/her choice			
7	Stay home with Dad while Mum goes out for the evening.	7	Choose what to have for dinner			
8	Stay home with Grandma while Mum goes out for the night.	8	Extra late bedtime (Saturday)			
9	Stay home with sitter while Mum goes out for the evening.	9	Bubble Bath			
10	Stay home with sitter while Mum goes out for the night.	10	Going on a family picnic			

Goal: Not be afraid of making mistakes and getting into trouble.						
	Step	Fear (0 -5)	Reward			
1	Call his sister by the wrong name.	3	Going to the park			
2	Colouring out of the line at preschool.	5	Treat of his/her choice			
3	Don't brush his hair before preschool.	7	Renting a video			
4	Singing the wrong lyrics to songs at preschool.	8	Having the TV in bedroom for one night.			
6	Wear his shirt the wrong way around when going out for dinner.	10	Kite flying with the family			

^{*} Note: Stepladders do not have to be exactly 10 steps.



Breaking down steps

When you make stepladders for your child, you will need to have a number of small steps for each task. As we discussed before, you will need steps that are difficult for your child, but not too hard. To get enough steps so that each one is a little harder than the one before, but not too hard, you will need to work out ways to break situations down into smaller steps. There are a number of ways you can do this.

- Change the number, age, gender, or familiarity of the people present while doing a step (for example, if an overall task or step is for your child to spend time at the park with someone other than their mother, you might create several steps by getting them to go to the park with different people, for example, their father, an older sibling, a grandparent, a family friend, and so on).
- Change items by the location of the task (for example, staying in a small shop while Mum waits outside versus waiting at a certain isle in a big toy store while Mum walks around).
- Change the amount of time spent in the situation (for example, staying with the sitter for one hour vs. staying with the sitter for 3 hours).
- Change the time of day (for example, Mum going out at night vs. during the day).

First exposure task:

Goal:					
	Step	Fear (0 -5)	Reward		
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					



Second exposure task:

Goal:					
	Step	Fear (0 -5)	Reward		
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Parent Anxiety

When your child begins to do stepladders, you may find that you are the one who feels most worried. There will be times when you will be sending your child out to face some pretty difficult situations and she or he might possibly become quite upset. At these times, many parents feel guilty and torn and this is perfectly normal.

You need to think carefully about whether your own anxieties are getting in the way of helping your child face his fears. There are two main ways this can affect your child's stepladders: by picking up your worries and by stopping them having the full stepladder experience. First, children can pick up subtle messages from parents about how capable they are or how difficult a certain task may be. For example, if you are leaving your child at home with a sitter and you are looking really worried and keep telling your child over and over that it will be okay, your child might start to think that something is wrong. For this reason, it is important that you don't let your worries show. You need to be positive about attempting the steps and believing that your



child can do it. Parents sometimes let their worries show by excessively reassuring their children about the situation (even before the questions are asked) and also show that they are anticipating their child's distress and objection. Remember the form "Jumping in Too Soon" – you need to remember that the worst that can happen is that your child might get a little upset and that he or she will cope with that!

Second, you might find that you don't write some steps or you put them off because you worry that it will be too much for your child. You need to remind yourself that encouraging your child to face his/her fears is good for them and is the only way they will overcome their fears. You also want to remind yourself why you want to help your child overcome his/her fears. What are his/her fears stopping them from doing? Why is that a problem? You need to remind yourself that your child's worries are stopping him/her from making friends and enjoying themselves. Bearing this in mind, you know that despite feeling anxious about your child doing the steps, you want to ensure that they learn that the situation is not that scary and that they are able to deal with what happens.

List some your own worries and think about how these worries may affect your child when s/he is doing the steps. (e.g. other people will think I'm a bad parent, my child cannot handle the situation, I'm scared of that too).

<u>1.</u>			
2.			
3.			
4.			
5.			
6.			

If you feel that your own worries and fears might be getting in the way of fully helping your child, there are two things to do.

- 1. Ask another person to help you set up your child's stepladders and help you through them with your child. For example, your partner, your own parent, or a close friend could be really helpful, just to support you through it.
- 2. Ultimately, you might want to think about getting professional help for your own fears and worries. Overcoming your own anxieties will be helpful for your child in the future and also for your own quality of life.

Practice tasks

- 1. Do the FIRST (and SECOND if possible) exposure task(s). Keep a record of it in the "Stepladders in Practice"
- 2. Continue to keep track of times when you might jump in too soon and see if you can try to hold back a bit. Keep track using the form *Jumping in Too Soon*.
- 3. Praise your child if you see him/her maintaining eye contact. Also remember to encourage your child to look at people when they speak (or when being spoken to). Let them practice this with you and their siblings too! Don't forget to use plenty of praise!

Stepladders in Practice

Day/ Time	What Step was being attempted?	What problems were encountered?	How were the problems resolved?	Did you fall into any parenting traps?	What strategies did you use to overcome these problems?	Does the step need to be repeated?

Session four

In today's session, your child will learn how to:

- Express happy and sad feelings
- The children will learn that telling people that they are sad is a good thing because they will try to make them feel better.
- They will also be taught that feelings can change, so even if they feel sad, their feelings can change and they can feel better.
- They will also learn how to identify various emotions on pictures that they will be shown.

Review: Stepladder in Practice and Jumping in Too Soon I should really be aware of that!

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×						
×						
×	 					
x _	 				 	
×						

Troubleshooting Stepladders

Getting stuck:

Children may get stuck on a step and refuse to try the next one, may move through the steps very slowly, or they may want to give up on the stepladder altogether. You need to build up your child's confidence by reminding the child of the last few steps that he or she has successfully done. Use this opportunity to really praise your child for his or her efforts and the gains that have been made. It is possible that the next step is just a bit too big. Brainstorm ways in which the next step can be broken down into slightly smaller steps. Also ask yourself if you have been rewarding your child as promised, or whether your child is bored with the rewards.

Need for reassurance:

It is important not to give in by providing too much reassurance for your child during stepladders. This does not mean that you need to be nasty or hard, but rather that you gradually need to encourage your child to rely more and more on themselves. If you are finding it hard to hold back, you need to ask yourself, "what is the worst that can happen if I don't step in here – can my child cope with that?".

Dealing with "failure":

Sometimes things just won't go "according to plan". Your child might get spooked, change their mind, or suddenly panic and they might leave the situation (or you might pull them out) before they have really calmed down. First of all, it is very important to try not to let this happen if at all possible. If your child really does seem very upset, see if you can calm them down, distract them, or help them – but try and keep them in the situation until they can realise that it is not so bad. If this is simply not possible, then another step might be to pull them out a little way, try and calm them down, and then encourage them to try again. For example a child whose step is to go to a birthday party might suddenly get really scared when she first gets into the room and gets overwhelmed by the noise. Rather than go home, you should first try and calm her down right there and see if she can stay. If this is all too hard, you could go into a quieter room and calm down and then when she is relaxed there, take smaller steps into the main room. If she eventually succeeds, or even stays for the whole party but doesn't play with anyone, this is not a failure at all, but a great step.

However, there will be times when it really is all too hard and the step is not done (eg you have to leave the party). Anxious children (and their parents) are often very sensitive to "failure", so something like this might seem like the "end of the world". However, doing stepladders is an "up and down" affair. It is important to remember yourself and to remind your child that there is no way to fail stepladders—s/he just needs to keep trying. If a setback like this has hurt their confidence, you might need to go back a step. Break the steps into small ones, and just keep slowly moving ahead.

Taking on too much:

If the steps are too big, your child is more likely not to be able to do them and may then begin to lose confidence. If this happens, try to break the bigger steps into more manageable and smaller steps.

Difficulties with stepladders

Not enough time:

Doing stepladders takes time. Sometimes you may take a break to deal with other things. But if you want your child to build his or her confidence, you will need to put in the time and effort.

Limited parent motivation to create opportunities for steps:

Unfortunately helping a child build confidence is a slow and painstaking process. Success does not come overnight and you need to keep working on it. If you find your own motivation slipping, one thing you could try is to look back to the records you have kept. Hopefully your child will have made some gains (even small ones) and seeing these gains might help to give you the boost you need. Sometimes asking others whether they have noticed any changes in your child (like the daycare teacher or babysitter) can also give you a positive lift. And of course sharing the wear with your partner (or a close friend) if possible is extremely important.

Taking over because it is easier and faster:

Remember – stepladders should not only be done at the set stepladder times. You should try and grab any and every opportunity to encourage your child to try "scary" things and do things for themself. In other words, the whole of your child's life should become an opportunity to "face their fears". However, there will be many times when you will find it easier to do it for your child – because it is quicker and easier. Try not to give in to



this temptation! Children need a clear and consistent message that it is okay for them to face their fears and that they can do so independently.

Parent anxiety getting in the way of facing fear:

Parent's own unrealistic anxiety gets in the way of allowing their children to participate in stepladders or other everyday activities. One of the biggest difficulties for anxious parents will be trying to decide what is a reasonable thing for their child to do alone and what is really dangerous. Talk to other parents whose children are in the same situation and get their opinion. Remember to ask yourself, "if I don't take over for my child right now, what is the worst that could happen?"

Parent beliefs or expectations getting in the way:

Your own expectations and beliefs can affect your child's progress. For example, if your child is doing a stepladder to be less perfect, but at the same time, you believe deep down that they really should be doing it perfectly and that if they don't, this reflects badly on you, then you might find yourself being tense and anxious when your child is doing the stepladder, or not even letting them do it. The child may pick up on your anxiety and that adds to the anxious feelings that they experience. You need to try and keep a realistic view of what is ok and what is not. Remember to talk to others to see if you are perhaps being overly anxious and don't be embarrassed to seek professional help if you think you could use it.

Parent Activity: Exposure tasks

ANY NEW FEARS	FEAR RATING
(Situations that my child avoids or fears)	(o=no fear - 5 = maximum fear)
1.	()
2.	()
3.	()
4.	()

Third exposure task:

Goal:			
	Step	Fear (0 -5)	Reward
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Fourth exposure task:

Goal:			
	Cton	Fear (0 -5)	Reward
	Step	Fear (0 -5)	Reward
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			



Fifth exposure task:

Goal:				
		1_	(2 = X	
	Step	Fear	r (0 -5)	Reward
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Managing your own worries

We have said a few times in this program that parents of shy and inhibited children are often also anxious or sensitive themselves. In some cases, this is not a major problem and the parent may simply be slightly more sensitive or stressed than average. In other cases, one or both parents may be anxious or depressed to a clinical degree.

In this next section we will discuss a common strategy that can help you to better manage feelings of stress, sadness or anxiety. It is a strategy that is useful for everyone – after all, we all get worried and stressed at times. It will be especially useful to you if you are someone who has more stress than average. However, we need to also point out that this is only one small technique and will not be the full answer if you have more severe anxieties. As we have already mentioned, if that is the case, it is a good idea to seek help for yourself from a mental health professional such as a clinical psychologist. There are some very good programs around for anxiety disorders that have a high success rate. Doing this for yourself will put you in a better position to help your child.



Thinking realistically

Think of a typical scene. A young man sits at home with the evening meal prepared and waits for his girlfriend to get home from work. But she is late – very late. As the time ticks by, his thoughts get more and more dramatic – "she's pinned under a car", "she's been hit by a bus", "she's been attacked and left for dead in the carpark". Then she walks in the door, smiles and says, "sorry – there was an accident on the bridge and the traffic was backed up for hours and my phone was dead". All those thoughts suddenly seem quite crazy!

When people are anxious, shy, worried, stressed or even depressed, they often have very extreme thoughts (or beliefs). In most cases, these beliefs are not realistic. But most of us never challenge them or ask ourselves if this is "really" likely to be true. And so we keep worrying. To make things even harder, these beliefs are usually not conscious – they are automatic and very, very quick. So of course we never question them.

EVENT	THOUGHT/BELIEF	EMOTIONAL REACTION
e.g. spouse is home late	e.g. s/he has been in a car crash	e.g. anxiety, worry

■ Emotions are a direct result of your thoughts and beliefs about an event. When your thoughts and beliefs about a situation change, your emotions will too.

EVENT	THOUGHT/BELIEF	EMOTIONAL REACTION
e.g. spouse is home late	e.g. s/he got caught up in a	e.g. relief or minor annoyance
	meeting	

- Many thoughts are automatic, so you may not be directly aware of them. It takes time and practice to identify them.
- One really good way to control your anxiety is to first, identify (become aware of) your extreme beliefs and then to work out whether those beliefs are really realistic. You can do this by asking yourself a series of questions.

Some good questions to ask about your beliefs:

- What is the evidence?
 - What do I know about this situation? What are the facts? Or the statistics?
- What has happened in the past?
 - Has this sort of thing happened in the past? Does it happen every time? Is it really very likely to happen?
- What else could happen?
 - Are there other possible explanations? Could something different have happened?
- What has happen to other people in this situation?
 - What have others told me or what have I heard? How many others does this happen to?
- If the bad thing really happens, what would I do?
 - Would I be able to deal with it? Do I have a plan of action? Could I cope?
- What would I say to someone else in this situation?
 - We can often be very realistic with others, but we ignore our own advice. If one of my friends
 was in this situation and had these thoughts, what would I say to them?



	Realistic Thinking
Event What is happening?	I have to give a presentation at work tomorrow.
Thoughts What am I thinking? What is making me feel this way? What do I think might happen?	I am worried I might bore my audience and they might fall asleep during my presentation. Worry rating: 8
What is the evidence? What has happened in the past? What else could happen? Possible alternative explanations? What is most likely to happen? What has happen to other people in this situation? If the bad thing really happens, what would I do? Would I be able to deal with it? What would I say to someone else in this situation?	Most people have been awake but there were one or two people who have fallen asleep during my presentations. The presentation was after lunch and the room was stuffy so some people were uncomfortable and dozing off. Those people who were dozing off would be anyway, no matter who was giving the presentation. Most people will stay awake. When other people were giving presentations, there were people who dozed off too. I have dozed off during presentations, not because it was boring but just because I was sleepy. If people really dozed off, I could just continue with my presentation and not be bothered by them. I can just concentrate on a good delivery for the people who are interested and awake. If someone told me that they were worried that people would fall asleep during their presentation, I would tell them that there are many reasons why people fall asleep during presentation. It does not necessarily mean that the presentation was boring.
What is my realistic thought?	Most people will stay awake during the presentation and even if people fall asleep, it may not necessarily be because I am boring. Worry rating: 3

Everyone can benefit from using realistic thinking! Try using realistic thinking on your own worries. It is also important to master the skill so that you are able to guide your child in using the skill in the future. And as with any skill, you need lots of practise to master it!



Parent Activity: Realistic Thinking

Realistic Thinking			
Event	My child is anxious about starting Kindy.		
What is happening?			
Thoughts			
What am I thinking?			
What is making me feel this			
way?			
What do I think might			
happen?		Worry rating:	
What is the evidence?			
What has happened in the			
past?			
What else could happen?			
Possible alternative			
explanations?			
What is most likely to			
happen?			
What has happen to other			
people in this situation?			
If the bad thing really			
happens, what would I do?			
Would I be able to deal with			
it?			
What would I say to someone			
else in this situation?			
What is my realistic			
thought?		Worry rating:	

Realistic Thinking					
Event					
What is happening?	My child is anxious about his/her first school excursion.				
Thoughts					
What am I thinking?					
What is making me					
feel this way?					
What do I think might	NA/a www. wastim wa				
happen?	Worry rating:				
What is the					
evidence?					
What has happened in					
the past?					
What else could					
happen?					
Possible alternative					
explanations?					
What is most likely to					
happen?					
What has happen to					
other people in this					
situation?					
If the bad thing really					
happens, what would I					
do?					
Would I be able to					
deal with it?					
What would I say to					
someone else in this					
situation?					
What is my realistic					
thought?	Worry rating:				

Practice tasks

- 1. Implement THIRD, FOURTH and FIFTH exposure task(s). Keep record in "Stepladders in practice"
- 2. Practice on the "Realistic Thinking" forms.
- 3. Ask your child how he/she is feeling today. Guide your child to express how he/she is feeling and attend to the emotions that they are experiencing. Don't forget to praise!



Realistic Thinking

	Described a Third to a
	Realistic Thinking
Event	
What is happening?	
Thoughts	
What am I thinking?	
What is making me	
feel this way?	
What do I think might	Worry rating:
happen?	vvoiry ruing.
What is the	
evidence?	
What has happened in	
the past?	
What else could	
happen?	
Possible alternative	
explanations?	
What is most likely to	
happen?	
What has happen to	
other people in this	
situation?	
If the bad thing really	
happens, what would I	
do?	
Would I be able to	
deal with it?	
What would I say to	
someone else in this	
situation?	
What is my realistic	
thought?	Worry rating:
=	

Session five

In today's session, your child will learn:

- To express scared feelings.
- The "Balloon Breathing" relaxation exercise

Balloon Breathing relaxation exercise

The best position for relaxation exercises is either sitting up straight in a chair or sitting cross legged on the floor. You child may also lie down flat on their back if they choose to. Be sure that your child is in a comfortable position with their shoulders relaxed.

- 1. Ask the children to put their hands on their stomachs close to their belly button.
- 2. You are now going to ask them to imagine that there is a balloon in their stomach which they want to fill up with air and then empty.
- 3. Have them select the colour of their balloon. It can be any colour they want it to be.
- 4. They are now going to pretend that this coloured balloon is in their stomach.
- 5. Show them how to breathe in and fill up their balloon. In order to do this, they need to breathe in and let their chest and stomach expand with their mouths relaxed and open to allow the air to get to the base of their lungs. They should feel their balloon fill up with air and actually see their tummy expand, or get bigger.
- 6. Ask your child to completely fill up their balloon while remaining comfortable 7. Then, ask them to slowly exhale and empty their balloon. They should imagine their balloon shrinking SLOWLY until it is completely empty.
- 8. It is important that they are breathing at a very relaxed and natural pace and that it is not effortful.
- 9. Have them do this 9 or 10 times.
- 10. The child has now learned a technique you can refer to as 'Balloon Breathing'

Explain again that this is a good thing to do when they feel scared.



Review: Stepladder in Practice I should really be aware of that!

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	Reali	stic T	- hinki	ing			
at's a g	Reali	stic T	- hinki	ing			
	Reali	stic T	- hinki	ing			
at's a {	Reali	stic T	- hinki	ing			
at's a {	Reali	stic T	- hinki	ing			

Sixth exposure task:

Goal:				
	Step	Fear (0 -5)	Reward	
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Seventh exposure task:

Goal:			
	Step	Fear (0 -5)	Reward
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			



Eighth exposure task:

Goal:			
	Step	Fear (0 -5)	Reward
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Problem Solving Approach

Sometimes it is hard to find the best solution to a difficult situation. This is especially the case when we are feeling stressed and pressured to deal with a problem quickly. Our usual clear thinking often goes out the window and we feel completely helpless. Having an anxious child can often bring out these situations. At these times it can be really useful to have a set of standard steps that you can turn to to help find the best solution.

Step 1: Summarize the problem

You need to state exactly what the problem is in non-emotional terms. Be clear.

Step 2: Brainstorm all possible answers

It is important in this step to try not to pick and choose. All possibilities should be written down, no matter how crazy they may seem. When you start brainstorming even crazy solutions, you often come up with things you hadn't thought of at first.

Step 3: List the positives and negatives

For each idea, you need to write the pros and cons. There is no perfect solution – everything will have some positives and some negatives.

Step 4: Put them in order

Once you have thought about the pros and cons for each, you can number the solutions from best (number 1) to worst.

Step 5: Choose the best strategy

Go to solution number 1 and try it.

Step 6: Evaluate its success

If it worked – great! If not, you then go to solution number 2 and try again.

Here is Alice's example. Alice's 4 year old daughter, Elise, is throwing a big tantrum in the morning and refusing to go to preschool.

Step 1: What is the proble		em: My child is throwing a tantrum and is refusing to go to preschool.			
Step 2: Brainstorm ideas for		Step 3: For each idea – what would happen if you did it?			
solving this problem.					
Solution 1:	Allow Elise to stay in and spend the day doing		Elise will calm down and be happy for now but she will learn that		
	something fun and interactive.		mum allows her to skip school because school is scary. She also		
			learns that when she stays home from school, she gets to do fun		
			things with mum and that the next time she does not want to go		
			to school, she can just throw a tantrum and get out of it.		
Solution 2:	Ignore Elis	e's tantrums and prepare for school	Elise will learn that she gets no extra attention from throwing		
	as per nor	mal.	tantrums and that throwing tantrums is not the way to get out of		
			going to school. She will also not be provided the opportunity to		
			skip preschool and be forced to face up to her fear. She will in		
			turn learn that school is not as scary as she thinks it is.		
Solution 3:	Make a pa	ct with Elise that if she goes to	Elise will be motivated to face up to her anxiety and will go to		
	preschool	today, I will bring her a nice treat	school and be given the chance to realize for herself that school		
	when I pic	k her up.	is not scary and that she can handle it by herself. She will also		
			feel proud and confident of herself when she is rewarded for her		
			brave behaviour.		
Solution 4:	Come to a	n agreement with Elise that I will go	Elise will likely agree to go to school. However, she will learn that		
		ol with her and stay there for the	school is scary and so mum has to wait outside for her so that I		
		to wait for her.	can rescue her if something bad happens.		
Step 5:	So	lution 3- Rewarding her for her brave I	<u>I</u> pehaviour		
		Solution 2- Ignoring the unwanted behaviour			
Second best?					
Step 6: Evaluate how Eli		se was still a bit wary about going to s	chool but pushed herself to go because she really wanted the		
your idea worked –		at. She was extremely happy with the	bag of sweets I bought for her. She also told me that she had a fun		
what would you do		y at school and that she played block	s with her friends.		
next time?		e next time she has a tantrum about w	ranting to miss school, I will remind her that she did a great job the		
	la	last time and had so much fun at school. I will continue to reward her for her facing up to her fears.			

Parent Activity: Problem solve one of your own worries.

Step 1: What is the	My child has been invited for a sleep over but he doesn't want to go. I am unsure			
problem:	whether I should push him to go.			
Step 2: Brainstorm ide	eas for solving this problem.	Step 3: For each idea – what would happen if you		
		did it?		
Solution 1:				
Solution2:				
Solution 3:				
Solution 4:				
Step 4: Which idea				
is best? Which idea				
is second best?				
Step 5: Evaluate				
how your idea				
worked – what				
would you do next				
time?				

Parent Activity: Problem solve one of your child's worries.

Step 1: What is the Justin does not want to play with me.		
problem:		
Step 2: Brainstorm ideas for	solving this problem.	Step 3: For each idea – what would happen if you
		did it?
Solution 1:		
Solution2:		
Solution 3:		
Solution 4:		
Step 4: Which idea		
is best? Which idea		
is second best?		
Step 5: Evaluate		
how your idea		
worked – what		
would you do nest		
time?		

Parent Activity: Do some realistic thinking for the same worry.

Realistic Thinking			
Event			
What is happening?	Justin does not want to play with me.		
Thoughts			
What am I thinking?			
What is making me			
feel this way?			
What do I think			
might happen?	Worry rating:		
What is the			
evidence?			
What has happened			
in the past?			
What else could			
happen?			
Possible alternative			
explanations?			
What is most likely			
to happen?			
What has happen to			
other people in this			
situation?			
If the bad thing			
really happens, what			
would I do?			
Would I be able to			
deal with it?			
What would I say to			
someone else in this			
situation?			
What is my			
realistic thought?	Worry rating:		

Practice tasks

- 1. Implement exposure tasks over next three weeks. Keep record in "Stepladders in practice"
- 2. Fill out 'Problem solving' forms and 'Realistic thinking' forms
- 3. Look out for situations where someone might not want to play with your child and work out with your child why other children might not want to play and what else they could do to keep themselves happy.



Problem solving

Step 1: What is the	
problem:	
Step 2: Brainstorm ideas for solving this problem.	Step 3: For each idea – what would happen if you
	did it?
Solution 1:	
Solution2:	
Solution 3:	
Solution 4:	
Step 4: Which idea	
is best? Which idea	
is second best?	
Step 5: Evaluate	
how your idea	
worked – what	
would you do nest	
time?	

Session six

In today's session, your child will learn:

What to do if someone doesn't want to play:

Review: Stepladder in Practice

- The children are taught to understand that sometimes people just feel like playing alone.
- They can look for someone else to play with to keep happy.

I shoul	d really	be awa	re of that	!	
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*					
*					
*					
*					
Raviev	w Prob	lem Sol	ving		
		l solutio			
×					
*					
×					
×					
×					

Review: Realistic Thinking That's a good piece of evidence!

x _	 	 	 		
x _					
x _	 				
x _	 	 			
x _	 			 	
×					

MY CHILD'S PROGRESS

Refresh your memory by looking back at session one and the list of worries, fears, shy and withdrawn behaviours that you listed about your child. Then, using that list as a guide, make a list of your child's behaviours and/or situations that have improved:

BEHAVIOURS AND/OR SITUATIONS THAT HAVE IMPROVED

1.		
2.		
3.		
4,		
5.		

Now, using the session one list as a guide, make a list of the behaviours and/or situations where you would still like to see some improvement:

AREAS THAT STILL NEED SOME WORK

1.		
2.		
3.		
4,		
5.		

Dealing with my child's inhibition in the future

Now that you have completed the Cool Little Kids program for shy preschoolers, you should have noticed some decreases in your child's shyness and sensitivity. But this is just the beginning - long-term change needs continued work. You will need to keep helping and reminding your child to be courageous. There are two levels for your future work. First, 10 weeks is too short to expect really big changes. You need to keep on working at building your child's confidence and keep going up those stepladders. You need to set some



goals for the coming weeks and months and make sure that you keep practicing all of the techniques you have learned here for quite a few more weeks.

Second, you will need to build these techniques into your own and your child's life. Facing difficult situations, letting your child learn from his or her own mistakes, and thinking more realistically, will need to be things that you and your child do at every opportunity.

Your life motto should be: If there is something that scares my child, I should encourage him/her to face up to it and deal with it."

There will also be times in your child's life when difficulties might reappear. This is particularly likely at times of stress. For example, at the beginning of school, if there are family troubles, or following a serious illness. At these times, you may need to go back to the beginning and re-introduce the exercises and activities that you have learned in this program.

General Strategies

- Allow your child to make his or her own mistakes and don't take over and protect your child too quickly. Whenever possible, encourage independence in your child and praise him or her for tackling things him/herself.
- Praise and pay attention to your child, especially when you notice brave behaviours.
- Encourage your child to use good social and interpersonal skills. Help your child to build good friendships.
- Keep working on your own fears or worries. Model brave behaviours and approach, not avoidance, for your child whenever possible.
- As he or she gets older, encourage your child to look for evidence with respect to his or her beliefs.

 Teach them to think more realistically in situations where they become worried or upset. You can also teach them how to problem solve so that they can think about what they can and cannot change in a certain situation. From there, they can work out possible options and choose the best one.



■ Encourage your child at every opportunity to approach scary situations and not to avoid. If you notice avoidance, encourage your child to confront the situation. Reward for good attempts.

Parent Activity: Future Challenges?

What are some of the challenges your child may face	What strategies would you use? (e.g. step ladder
in the future?	approach, realistic thinking, problem solving)
(e.g. Going to Kindy, First school camp)	