The Prevention of Childhood Anxiety and Promotion of Resilience among Preschool Aged Children: A Universal School Based Trial

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This study is the first to examine the effectiveness of the *Fun FRIENDS* program, a school-based, universal preventive intervention for early childhood anxiety and promotion of resilience delivered by classroom teachers. Participants (*N*= 488) included children aged 4-7 years attending 1 of 14 Catholic Education schools in Brisbane, Australia. The schools were randomly allocated to one of three groups, the intervention, active comparison and waitlist control group. Parents completed standardised measures of anxiety and behavioural inhibition, resilience, social and emotional functioning and behaviour difficulties in addition to parental stress and anxiety, at pre- and post- and 12-month follow up. Teachers also completed a parallel measure of social and emotional strength at the three time points. Comparable results were obtained for the intervention and comparison groups; however the intervention group achieved greater reductions in behavioural inhibition, child behavioural difficulties and improvements in social and emotional competence. In addition significant improvements in parenting distress and parent-child interactions were found for the intervention group, with gains were maintained at 12-month follow-up. Teacher reports revealed more significant improvement in social and emotional competence for the intervention group. Clinical implications of the findings are discussed, along with limitations and directions for future research.

Key Words: child, anxiety, prevention, early intervention, universal

Introduction

Anxiety disorders are among the most prevalent psychiatric disorders in children and adolescents (Costello et al., 2003; Hirshfeld-Becker, Micco, Mazursky, Bruett & Henin, 2011; Kessler et al., 2005). The prevalence of anxiety disorders in a community sample of preschool aged children (2 – 5 years) has been reported as 9.5% (Edwards, Rapee, Kennedy, & Spence, 2010; Egger & Angold, 2006), with up to 28.8% of children developing an anxiety disorder during their lifetime (Kessler et al., 2005; Merikangas et al., 2010). If untreated, anxiety has the potential to cause significant disruption to a child's developmental trajectory due to the chronic course and low rates of remission (McLoone, Hudson, & Rapee, 2006). Further, childhood anxiety may fail to be recognised as many anxious children present as shy, cooperative or compliant within the school setting (Albano, Chorpita, & Barlow, 2003). However young children (under the age of 8 years) presenting with anxiety sympotomology have only recently been included in intervention studies (Van der Sluis et al., 2012). Regardless of the limited research focus, results have been promising in terms of the potential benefits of cognitive behavioural therapy (CBT) based interventions for young anxious children (Cartwright-Hatton et al., 2011; Hirshfeld-Becker et al., 2008; 2010; Kennedy et al., 2009; Monga et al., 2009; Pincus et al., 2008; Rapee et al., 2005; van der Sluis et al., 2012; Waters et al., 2009).

The majority of children with anxiety disorders do not receive appropriate intervention (Hirschfeld et al, 1997; Merikangas et al., 2010; Olfson et al, 2003; Sawyer et al, 2000). Research indicates that as many as 80% of children and adolescents in need of mental health services fail to receive such intervention (Cobham, 2012; Essau, 2005). A number of barriers to accessing psychological intervention exist including cost, time, availability, commitment, and location particularly for families living in rural areas (Barrett & Pahl, 2006; Jorm & Wright, 2007). Many children presenting with anxiety suffer for years before receiving help (Thompson, Hunt & Issakidis, 2004), with the average delay between symptom onset and consultation with a mental health professional ranging from 6 to 14 years (Christiana et al., 2000; Kessler et al., 1998). An additional concern is treatment non-response, which may be associated with multiple factors (Donovan & Spence, 2000; Ginsburg et al., 2011). Taken together, these findings have inspired a conceptual shift

in the development and implementation of mental health intervention worldwide (Delaney & Staten, 2010), from traditional models of psychological intervention delivery, to an increased focus on prevention as a way of improving both the immediate health of children and young people and contributing to longer-term resilience. Consequently there has been an increased emphasis on developing innovative prevention protocols for preschool aged children (Bayer et al., 2011; Bienvenu & Ginsburg, 2007; Fox et al., 2012; Fox, Haplern, & Forsyth, 2008; Hirshfeld-Becker & Biederman, 2002). Such early preventive interventions have the potential to reduce rates of depression, with anxiety typically preceding co-morbid depressive disorders (Bienvenu & Ginsburg, 2007; Flannery-Schroeder & Kendall, 2004), and may be most powerful when targeted at high-risk life transitions, such as entry to primary school or other significant transition points (Hirshfeld-Becker et al., 2008), affording young children and their parents the opportunity to learn positive coping and emotional regulation skills. Given many of the barriers associated with accessing psychological intervention, and the high drop-out rates there is an increased need for cost effective and accessible intervention delivered in a universal context such as the school environment.

Cognitive Behavioural Therapy (CBT) Parent-Based Intervention

A review of the literature identified several studies addressing early prevention and intervention with this population, with many of these focused on the parent as the target of the intervention. One of the earliest studies incorporating a preventive intervention with an experimental design (*N*= 45) (La Freniere & Capuano, 1997) assessed the effectiveness of a 20 session (6 month) integrated home-based prevention program for anxious/withdrawn preschoolers. At post intervention, significant immediate improvements in terms of teacher-rated social competence were identified for children in the intervention group, with total levels of parental stress also achieving a significant decline over the 6-month intervention. Similarly, a pilot study examining the effectiveness of a selective prevention based parent program for anxiety and behavioural inhibition (BI) (*N* = 7) (Rapee & Jacobs, 2002), which aimed to minimise cost through minimal therapist input and long-term educational value resulted in marked reductions in BI and anxiety diagnoses in children to 12 month follow up.

In an extension to this study, Rapee, Kennedy, Ingram, Edwards, & Sweeney (2005) conducted a larger scale selective prevention study examining the effects of a universal CBT based prevention program for parents (*N* = 146, aged 36 - 62 months). The intervention was designed to be brief to provide maximum potential for public health implementation and targeted an identified risk factor for anxiety, an inhibited/withdrawn temperament and included 6, 90-minute sessions. Children of parents in the educational parent group demonstrated a significantly greater decrease in anxiety diagnoses at 12-month follow-up, relative to the monitoring control condition.

The effectiveness of a parent based early intervention program facilitated in a group format (*N* = 71) (Kennedy, Rapee, & Edwards, 2009) demonstrated a significant reduction in the frequency and severity of anxiety disorders and inhibition for children in the intervention group, relative to children on the waitlist with further improvement at 6 month follow-up. The findings provide further support for the benefits of early parent based interventions to alter the developmental trajectory of anxiety in a high-risk group of young children.

The *REACH for RESILIENCE* (*N* = 734, aged 3 – 6 years), CBT based intervention, developed exclusively for parents was trialed in 25 preschools over a three month time period using a controlled-trial design (Dadds & Roth, 2008). Results demonstrated decreases in teacher reported internalising and externalising difficulties and a higher percentage of the intervention group moved from at-risk to low-risk status following the intervention. This study represents one of a very few universal trials with this population.

More recently, Rapee, Kennedy, Ingram, Edwards andSweeney (2010) conducted a randomised controlled trial of a brief parent based intervention program, designed to prevent anxiety in young children (*N* = 146). Children of parents that participated in the intervention were found to have a reduced risk of suffering from symptoms of anxiety at middle childhood (three year follow-up). This study is significant in that it represents the first to demonstrate lasting changes in children's symptoms of anxiety, following a brief intervention in early childhood. This simple low cost intervention may potentially alter the trajectory of anxiety and related disorders in young inhibited

children and provides promise for the effectiveness of parent-based intervention for the prevention of early child anxiety.

A very recent study piloted the *Confident Kids program* (van der Sluis et al., 2012), a CBT based parent intervention developed for parents of children aged 4 – 7 years (*N* = 26). The intervention was delivered in four 2-hour group parent sessions across a 4 week period, with parent's taking the role of "therapist coaches" for their children. Comparable results to previous studies were obtained, with significant decreases in child anxiety and behavioural inhibition as reported by both parents and teachers (van der Sluis et al., 2012). This study provides further support of the value of incorporating a parental component to early intervention with young children.

CBT Child- and Parent-Based Interventions

A number of studies have examined the efficacy of early intervention for childhood anxiety which include both child and parental components. For example, the efficacy of a CBT-based intervention for anxiety, the *"Being Brave"* (*N* = 64) program (Hirshfeld-Becker, et al. 2008; Hirshfeld-Becker, et al., 2010). This program is a developmentally appropriate, manualised CBT-based intervention program for children and their parents, targeting identified risk factors for anxiety. Significant reductions in anxiety disorder diagnoses were obtained with outcomes maintained at two-year follow up. A similar intervention protocol for early childhood anxiety, *Taming "Sneaky Fears*" (*N* = 32), based on a CBT framework (Monga, Young & Owens, 2009) obtained comparable results, with significant reductions in anxiety disorder diagnoses and clinician-rated improvement in functioning. These findings are comparable to results obtained following CBT protocols for older children (Barrett, Rapee, & Dadds & Ryan, 1996; Kendall, 1994; Kendall & Southam-Gerow, 1996) and provide promising preliminary data for the adaptation of a CBT-based parent and child protocol for early childhood and enhancing positive coping skills.

Waters, et al., (2009) conducted a trial assessing the efficacy of a group-based cognitive behavioural intervention for young anxious children aged 4 to 8 years (*N* = 80). A parents-only CBT group intervention "*Take ACTION*" was directly compared with the same intervention delivered to both children and parents, relative to a wait-list-control condition. No significant differences between the two active conditions on

other outcome measures were found. The study represents a valuable contribution to the literature, providing support for the exclusive delivery of a CBT intervention to parents of young anxious children as a viable intervention approach.

The first-ever universal school-based efficacy trial of the *Fun FRIENDS* program (Barrett, 2007a,b) was recently conducted for young children (*N* = 263) (Pahl & Barrett, 2010). This study represents one of very few universal trials which focus on young anxious children, in addition to a parental component to the intervention. *Fun FRIENDS* is a developmentally appropriate, play-based CBT intervention and prevention program for anxiety and social and emotional skill development, developed as a downward extension of the *FRIENDS for Life* program (Barrett, 2004, 2005). Immediately post intervention no significant differences were obtained; however, at 12-month follow up, improvements were found on anxiety, BI and social-emotional competence for children in the IG. The results from this study provide support for the use of universal intervention programs for young children implemented within the school context.

The most recent preventive intervention for anxious preschoolers and their parents involved a trial of the new *Strengthening Early Emotional Development* (SEED) program (Fox, et al., 2012) to promote social and emotional and behavioural competencies *(N*= 16, aged 3-5 years). SEED incorporates content from other evidence-based group programs including the *Preschool PATHS* and the *Cool Kids* program (Domitrovich, Cortes, & Greenberg, 2007; Rapee, Lyneham, & Schneiring, 2006). The intervention produced improvements in child emotional knowledge and social reasoning skills in addition to reductions in parental anxiety and development of more positive parental attitudes towards their children, providing further support for the potential of preventive programs for early childhood anxiety.

The above literature review indicates a number of areas of concern. First, anxiety disorders are among the most prevalent psychiatric disorders in young children (Edwards, Rapee, Kennedy, & Spence, 2010; Egger & Angold, 2006) and have the potential to cause significant developmental disruption (McLoone, Hudson, & Rapee, 2006) therefore enhancing our understanding of risk and protective factors is critical. Second, the prevention of early childhood anxiety represents a significantly neglected

area of research, with limited attention to the effectiveness of child based early intervention and prevention programs. Third, child-focused early interventions which include a parental component have produced promising outcomes for the prevention and treatment of early child anxiety, replication of these findings is required. Fourth, there is a clear need for cost–effective universal preventive interventions for young children.

Universal interventions where the population is the target of intervention (Mrazek & Haggerty, 1994) are receiving increasing support as viable and cost effective approaches to early intervention for anxiety (Lowry-Webster et al., 2001; Pahl & Barrett, 2010; Stallard et al., 2007). Schools represent an optimal context for prevention and early intervention efforts. The focus on the collective rather than individual level avoids labeling children and normalises the promotion of positive social and emotional skills. This practice also increases maintenance of these skills due to sustained daily contact with children, peer support and inclusion of social and emotional skill development as part of standard curriculum. Further, this approach may neutralise many pragmatic and perceptual barriers to accessing community based mental health services (Kendall, Settipani, & Cummings, 2012) and represents an ideal context to practice and perfect skill acquisition (Barrett & Pahl, 2006). Although there is a need for early intervention models, the effectiveness of such intervention protocols for younger children remain largely unknown (Egger & Angold, 2006; Eley et al., 2003; Spence, Rapee, McDonald, & Ingram, 2001; Sterba, Egger, & Angold, 2007), which highlights a need for a prevention program with established effectiveness in this population.

The primary objective of this study was to extend Pahl and Barrett's (2010) pilot study and evaluate the effectiveness of the *Fun FRIENDS* intervention, delivered as a universal curriculum-based program to reduce anxiety and BI and enhance social and emotional competence in young children. The study aimed to compare the outcome of the *Fun FRIENDS* intervention group (IG) with the *You Can Do It* Active Comparison (CG) and wait-list control groups (WLG) at pre, post and 12-month follow-up. It was hypothesised the IG would be significantly more effective than the CG, and that both interventions would be more effective than the waitlist. More specifically, it was hypothesised that child anxiety symptoms would decrease from

pre to post-intervention and continue to improve at follow-up for the IG. Further it was predicted that positive coping skills (approach behaviours, help seeking) and emotional regulation skills (self soothing, anxiety management) would increase and maladaptive coping (avoidance behaviour and reassurance seeking) would decrease from pre to post- intervention, for the IG with results maintained at 12-month follow-up.

The second objective of the study was to explore whether it was possible to have a positive impact on levels of parental (mother and father) anxiety and distress. It was expected that maternal and paternal anxiety and distress in the intervention group would decrease as rates of anxiety decreased in the child. Thus the inclusion of parents in the intervention may be critical in terms of educating parents and enhancing positive coping skills for themselves and their children.

Method

Recruitment

Schools were recruited via email correspondence sent by Brisbane Catholic Education Administration, Australia inviting all 104 Catholic Education preschools and primary schools in the greater metropolitan area of Brisbane to participate in the research project. 16 of the schools that volunteered to participate following the initial email were contacted, and an information meeting outlining the project was held for principals and teachers for each of the 16 schools. 14 of the 16 schools that demonstrated initial interest, agreed to participate in the study. The majority of the children attending these schools (and characteristic of the general population of Brisbane) were White, and working to middle class. Detailed information about ethnicity was not obtained.

Once informed consent had been obtained from each of the principals, the participating schools were matched on socioeconomic status and then the schools were randomly assigned to an intervention group (IG), active comparison group (CG) or waitlist control group (WL). Following random assignment letters were sent to the families in each school inviting parents to attend an information evening discussing the rationale for the research project and details of what would be required of each family should they consent to participate.

Participants

The final sample consisted of 488 children (271 females, 217 males) between the aged of 4 and 7 years (mean age = 5.42 years, SD =0.67) across 14 schools. Random assignment of the schools to the three conditions, resulted in the final sample of 160 children (95 female, 64 male) in the IG, 196 children (101 female, 95 male) in the CG and 130 children (75 female, 58 male) in the WLG. 440 fathers and 484 mothers completed the battery of questionnaires. Approximately 3.3% of the sample reported an annual family income (Australian dollars) under $30,000, 13.3% between $30,000 and $60,000 and 76.5% of the sample reported an income above $60,000. The schools ranged in terms of enrolment number from 249 to 641 students and socioeconomic status of the schools ranged from 1033 - 1200 based on the Index of Community Socio-Educational Advantage (ICSEA, mean = 1000, SD = 100). The number of prep and pre prep classes varied across the schools from 1 to 4 classes participating in the research. 31 teachers participated in the study.

Measures

Parents and teachers of children who consented to be involved in the research completed a battery of questionnaires at three different points in time (pre-intervention, post-intervention and 12-month follow-up). These measures are detailed below;

Parent Completed Measures for Child

Preschool Anxiety Scale

The *Preschool Anxiety Scale* (PAS; Spence, Rapee, McDonald, & Ingram, 2001), adapted from the Spence Children's Anxiety Scale, is a 34-item parent report assessment designed to assess childhood anxiety symptoms as defined by the Diagnostic and Statistical Manual, 4th Edition (DSM-IV, APA, 2000). The PAS provides a total score of anxiety (minimum score 0, to a maximum score of 112), in addition to five subscale scores: separation anxiety, physical injury fears, social phobia, obsessive-compulsive disorder, and generalised anxiety disorder. The PAS has adequate psychometric properties and good construct validity with the Child Behaviour Checklist (Achenbach, 1991; 1992; Achenbach & Rescorla, 2000),

correlations ranging from .59 to .68. Both parents completed the PAS conjointly in this study.

Behavioural Inhibition Questionnaire

The *Behavioural Inhibition Questionnaire* (BIQ; Bishop, Spence, & McDonald, 2003) is a 30-item parent report questionnaire assessing the frequency of behaviours associated with behavioural inhibition (BI) across a 7-point likert scale. The measure provides a total BI score, in addition to 6 specific scores characteristic of BI; peer situations, physical challenge, separation/preschool, performance situations, unfamiliar adults and general novel situations. The BIQ has demonstrated good psychometric properties, with high internal consistence (.87 for mother report, .85 for father report) and strong convergent validity (.87 for mother, .86 for father) against the inhibition scale of the *Temperament Assessment Battery for Children – Revised* (Martin, 1994), and good internal consistency for all informants. Parents were invited to complete this measure conjointly.

Behavioural and Emotional Rating Scale, Second Edition,

The *Behavioural and Emotional Rating Scale* (BERS-2; Epstein & Sharma, 1998) is a 52-item parent report measure, designed to assess five factors related to children's emotional and behaviour strengths; interpersonal strengths, family involvement, intrapersonal strength, school functioning and affective strength. The BERS-2 has demonstrated excellent inter-rater reliability (r> .83) and moderate to excellent test-retest reliability ranging from .53 to .99 (Epstein et al, 1999). This measure was used to assess social-emotional competence, parents were invited to complete this conjointly.

Strengths and Difficulties Questionnaire

The *Strengths and Difficulties Questionnaire* (SDQ; Goodman, 1997) is a 25-item measure designed to assess psychological adjustment in children aged 3 to 16 years. The items are divided between 5 scales: Emotional difficulties, Conduct Problems, Hyperactivity and Inattention, Peer Difficulties, and Pro-Social Behaviour. Participants are required to indicate either "not true (0), "somewhat true" (1) or "certainly true" (2) for each of the statements, with higher scores indicative of more significant problems for each subscale, excluding pro-social behaviour where higher

scores indicate positive adjustment. The SDQ has sound psychometric properties for all subscales (Vostanis, 2006), internal consistency (mean Cronbach a: .73), cross-informant correlation (mean: 0.34), or retest stability after 4 to 6 months (mean: 0.62). (Goodman, 2001; Goodman & Scott, 1999). Assessment of the psychometric properties of the SDQ based on an Australian sample generated evidence moderate to strong internal reliability across all SDQ subscales (Hawes & Dadds, 2004). Adequate validity was also achieved in terms of the relationship of the SDQ subscales to one another. In addition correlations between the subscales, teacher ratings, and diagnostic interviews demonstrated sound external validity (Hawes & Dadds, 2004). Parents were invited to complete this measure conjointly.

Devereux Early Childhood Assessment Clinical Form

The *Devereux Early Childhood Assessment Clinical Form* **(**DECA-C, LeBuffe & Naglieri, 1999) is a standardised, norm-referenced behaviour rating scale that evaluates behaviour related to social and emotional resilience and concerns in preschool aged children aged 2-5 years. The DECA evaluates the frequency of positive behaviours (strengths) as well as negative behaviours (concerns). The positive behaviours related to resilience include three Protective Factors Scales; initiative (11 items), self control (8 items) and attachment (8 items). The Total Protective Factors Scale is a composite of the three scales and provides an overall indication of the strength of the child's protective factors. The behaviours related to social and emotional problems comprise four Behavioural Concern Scales; Attention problems (7 items), Aggression (7 items), Emotional control problems (8 items) and Withdrawn/depressed (9 items). A Total Behavioural Concerns Scale is a composite of the four-behavioural concern scales, provides an overall index of the magnitude and severity of the child's beahvioural problems. Studies indicate that the DECA-C is a reliable instrument for assessing social and emotional competence and behaviour in preschool aged children (Buhs, 2003; Chittooron, 2003; Reddy, 2007). Internal reliability alpha coefficients for parents range from a low of .66 on Withdrawal/ Depression to .78 on Emotional Control Problems, with a median of .76. The development and standardisation of the DECA, including all original psychometric studies, are described in detail in the DECA technical manual (LeBuffe & Naglieri, 1999). The DECA was normed on a representative American sample of 2,000 children across 28 states. Half of the children in the sample were rated by a parent or

other family caregiver; and half by a preschool teacher. It is important to note that whilst the measure was normed on a sample of children aged 2-5 years, in the current trial the DECA was administered to all children in the sample with ages ranging from 4 – 7 years. Parents were invited to complete this measure conjointly.

Parent Completed Measures for Self

Depression, Anxiety and Stress Scale

The *Depression, Anxiety and Stress Scale* (DASS-21; Lovibond & Lovibond, 1994) is a 21-item self-report assessment measure. This measure provides an assessment of parental anxiety, depression and stress. The measure has demonstrated excellent psychometric properties with good reliability, with Cronbach's alpha ranging from 0.73 to 0.82 for the anxiety subscale and 0.82 for depression (Clara, Cos & Enns, 2001; Henry & Crawford, 2005; Lovibond & Lovibond, 1995). Studies have reported good estimates of internal consistency reliability for scale scores (range=.82 to .97) in both clinical and nonclinical samples (e.g., Henry & Crawford, 2005; Lovibond & Lovibond, 1995).The measure has also been found to correlate strongly with other widely used measures of depression and anxiety (Augustine., et al., 2012; Sukantarat, Williamson, & Brett, 2007). Mothers and fathers were invited to complete this measure independently from one another.

Hospital Anxiety and Depression Scale

The *Hospital Anxiety and Depression Scale* (HADS; Zigmond & Snaith, 1983) is a self-assessment instrument for detecting clinically significant depression and anxiety in patients attending outpatient medical clinics and for discriminating between anxiety and depression. It has been widely used as a screening instrument outside of the hospital setting, and also for rating psychiatric patients. The HADS is a self-report, 14 item scale with seven items measuring anxiety (HADS-A) and seven measuring depression (HADS-D). Scores range from 0 - 21 for each scale; higher scores represent more distress. The time frame refers to mood during the previous week. The HADS appears to have psychometric properties, with correlations between the two subscales reported to vary from.40 to.74 (mean.56) (Bjelland, Dahl, Haug & Neckelmann, 2002). Cronbach's alpha for HADS-A varied from.68 to.93 (mean.83) and for HADS-D from.67 to.90 (mean.82). The sensitivity and specificity for both HADS-A and HADS-D (0.80) were reported to be consistent with the *General Health*

Questionnaire (GHQ; Goldberg, 1978). Correlations between the HADS and other commonly used questionnaires designed to assess anxiety and depression were reported to be within the range of .49 to.83. (Bjelland, Dahl, Haug & Neckelmann, 2002). Mothers and fathers were invited to complete this measure independently

Parenting Stress Index, Short Form

The *Parenting Stress Index, Short Form* **(**PSI – SF; Bidin, 1994) is a 36-item parent report measure which provides an overall measure of stress within the parent child relationship and includes three sub scales; Parental Distress, Parent-Child Dysfunctional Interaction and Difficult Child. The PSI-SF is designed for the early identification of parenting and family characteristics that fail to promote normal development and functioning in children, children with behavioural and emotional problems, and parents who are at-risk for dysfunctional parenting. Studies of test-retest reliability (r =0.84) and internal consistency (α = .91) demonstrate high to excellent reliability (Abidin, 1995). The total score on the PSI-SF was used as a measure of parenting stress. Mothers and fathers were invited to complete this measure independently.

Measure Completed by Teachers

The *Devereux Early Childhood Assessment Clinical Form, Teacher Report* **(**DECA-C, LeBuffe & Naglieri, 1999) is identical to the parent report form. This is a standardised, norm-referenced behaviour rating scale that evaluates social and emotional resilience and concerns in preschool aged children. The DECA evaluates the frequency of positive behaviours (strengths) as well as negative behaviours (concerns). For teachers, the alpha coefficients range from .80 on Withdrawal/Depression to .90 on Attention Problems, with a median of .88.

Procedure

Phase One: Pre-assessment Screening

All parents were sent an information sheet and pre assessment questionnaire detailing the research project. Participants were informed that all responses would be confidential and would only be viewed by research staff and that they were free to withdraw at any time. In addition it was made clear that the intervention would be delivered during class time and at no cost to parents. None of the schools involved in

the current research project had been directly involved with the *Fun FRIENDS* program before this research project. Of the 14 schools that agreed to participate, none of the parents refused to allow their child to participate in the program, this is consistent with the pilot *Fun FRIENDS* study (Pahl and Barrett, 2010) and is likely due to the fact that the program was implemented as part of school curriculum. Pre-intervention assessment was conducted within a two-week time period with questionnaires sent to teachers and parents through school administration, with completed questionnaires returned to classroom teachers. Teachers completed the DECA for each child in their class participating in the research. The option to complete the questionnaires individually with the researcher was offered to parents to ensure all participants comprehended the questions regardless of academic or English language ability.

Post intervention assessment was conducted within two weeks of completion of the program and approximately 24 weeks following pre-assessment screening. At 12 month follow up the same procedure was adhered to, with schools sending the questionnaires to parents and collected by the classroom teachers within a two week time limit.

Intervention

Intervention Protocol – *Fun FRIENDS*

The Intervention program used was the *Fun FRIENDS* program. *Fun FRIENDS* is a developmentally appropriate downward extension of the *FRIENDS for Life* program created for the prevention of anxiety and promotion of social and emotional skills and resilience in early childhood (Barrett, 2007). The program name *Fun FRIENDS* is an acronym for the strategies taught within the program, with each letter corresponding to a specific skill. See Table 1, for a description of session content. The primary components of the program include relaxation, cognitive restructuring, attention training and graded exposure to anxiety provoking situations and problem solving, which are facilitated by peer and family support. The *Fun FRIENDS* program actively involves parents, teachers and children to promote skill acquisition and reinforcement of skills across contexts.

The intervention commenced approximately two weeks following pre-intervention assessment. Teachers were advised that the programs were to be delivered across two school terms with a recommended delivery schedule of one session per week. Further, the teachers were instructed that the program was to be delivered in chronological, however there was significant opportunity for creativity within each session. Teachers were provide with a leader's manual outlining the content and process for each of the 10 sessions (Barrett, 2007) and each child was provided with a *Family Learning Adventure* workbook which provides step-by-step instruction for home implementation of the session skills (Barrett, 2007b).

Teacher Training

Prior to commencement of the program all classroom teachers across the 4 schools allocated to the Intervention Group attended a one-day intensive training workshop, which provided psycho-education about childhood anxiety, the theoretical rationale of *Fun FRIENDS* and instruction in delivery and facilitation of the program. Content also addressed ethical issues associated with running groups with children and group process skills. The *Fun FRIENDS* Group Leader Manual (Barrett, 2007a) training manual, training aids, handouts, exercises, discussion questions, videos and overheads were standardised across training workshops via a training manual and resource kit (Barrett, 2007a). The lead researcher, a registered Clinical Psychologist, was responsible for conducting the training of all teachers allocated to the *Fun FRIENDS* program in addition to facilitating parent talks for all of the participating schools. Regular contact was initiated by the lead researcher with all teachers from the participating schools to provide support and answer questions relating to the implementation of the programs or address any questions arising. In addition the *You Can Do It* team was also available for consultation through the lead researcher to address questions arising from the implementation of this program. Regular consultation and communication with parents across all of the 14 schools was also maintained through updates in school newsletters. Parents were also provided with contact details for the researchers should they wish to discuss any concerns or provide feedback. In order to assess the integrity of the intervention protocol the teachers within the *Fun FRIENDS* intervention group were required to complete a weekly checklist indicating compliance with the manual session content.

Parent Sessions

Parents were encouraged to attend two parent sessions across the course of program implementation and coincided sessions 4 and 7. Parent sessions were conducted during the evening to increase the possibility that both parents may be able to attend. Session content included educating parents about child anxiety, social and emotional competence and resilience and outlined each of the component skills of the *Fun FRIENDS* program. Parents were encouraged to practice the skills and strategies in the home environment to ensure generalisation across contexts.

Insert Table 1 here.

Intervention Protocol - The *You Can Do It* Comparison Group (YCDI)

The *You Can Do It* CBT based social and emotional skills was included as an active control condition. This program is endorsed as an effective school based program, designed to be delivered at a universal level by teachers in the classroom setting to promote confidence and social and emotional strength (Ashdown & Bernard, 2012; Bernard & Walton, 2011; Bernard 2006). A recent study, similar in design to the current trial, examined the effect of the *You Can Do It* program on the social and emotional development and academic achievement of preparatory and grade 1 students attending a Catholic school in Melbourne, Australia (N = 99) (Ashdown & Bernard, 2012; Bernard & Walton, 2011). The program was delivered over 10 weeks by classroom teachers, with results indicating a statistically significant improvement in social and emotional competence and well being in children and a reduction in problem behaviours as rated by teachers.

Unlike the *Fun FRIENDS* program, *You Can Do It* does not involve any specific training for facilitators in terms of the implementation of the program. Teachers received the program material and manual and were required to administer the program as per the implementation directions.

The main objective of the *You Can Do It* program is the development of young people's social and emotional capabilities, including: Confidence, Persistence,

Organisation, Getting Along, and Resilience. Central to the development of these 5 Foundations is instilling in young people 12 Habits of the Mind that support and foster the 5 Foundations, including Accepting Myself, Taking Risks, Being Independent, I Can Do It, Giving Effort, Working Tough, Setting Goals, Planning My Time, Being Tolerant of Others, Thinking First, Playing by the Rules, and Social Responsibility (includes the values of Caring, Doing Your Best, Freedom, Honesty, Integrity, Respect, Responsibility, Understanding, Tolerance, and Inclusion) (Bernard, 1997).

Parent Training

The same initial parent information evening that was offered to parents in the IG, was also offered to the Comparison Group. An additional parent session was conducted by *You Can Do It program* educators half way through the program to provide parents with further information about how to reinforce the skills at home. The parent evenings at each of the schools was facilitated by the Director of the *You Can Do It* program.

Program Implementation

Following consent and completion of the same battery of questionnaires as the IG, the schools were provided with the *You Can Do It* program and resources. The teachers were responsible for implementing the program as per the guidelines for teachers set out in the manual. As per the IG, the comparison *You Can Do It* program was implemented once per week for approximately one hour across school two terms, facilitated by classroom teachers. A registered psychologist was available during the period of implementation to provide support for the teachers and respond to questions. Teachers were provided with the program manual and all required props and puppets.

Wait-list Group

The five schools allocated to the monitoring comparison group received the same initial parent information evening. The identical process of completing questionnaires was followed as for the IG and CG, with questionnaires completed at pre, post and 12 month follow-up. The schools continued with standard curriculum as normal for the 12-month wait period, with Clinical Psychologists available for consultation during

this period of time. Following the 12-month wait, all of the schools were offered the *Fun FRIENDS* program.

Results

Preliminary analysis

Preliminary analysis revealed large amounts of missing data for each of the father response measures (ranging from 25% for the defensive responding scale to 16% for the DASS-21). The *PSI-SF* was not completed by 10% of mothers at follow-up, and 8% of mothers at post-test. All remaining variables had less than 6% missing data.

In all, 200 of the 488 participants were missing on at least one observation. There were 15 cases that were missing on more than 30% of their data, and these data were removed to prevent potential bias arising from these non-responders. For the remaining participants data was clustered according to the pattern of responding using the VIM package in R (R Development Core Team. 2007). Only one clear pattern of missing data was observed, with 6.3% of respondents missing all father response data. The remaining participants showed no tendency to respond in any given pattern, suggesting that the data appear to be effectively missing at random across the data set. Due to the large amounts of missing data on some variables, it was decided to analyse only complete data points, using Linear Mixed Effects models for the analysis of the overall effect of the intervention. Linear mixed effects models include all observations, which are valid at each time point and are recommended as they reduce bias, which might otherwise be created in excluding those respondents with incomplete data (Cnaan, Laird, Slassor, 1998). Although there may still be issues of generalisability of the findings, the analysis of complete data is less problematic for multivariate analyses than is imputation of data when data are extensively missing as these analyses make less assumptions about the nature of the missing data and therefore produce less biased estimates (Kalton & Kasprzyk, 1982).

Examination of the distributions of the continuous measures revealed significant skewness as well as significant outliers among a large number of clinical measures. For each variable that was significantly skewed an appropriate transform was identified from the ladder of powers (square root, log, inverse and inverse log), which transformed the variable to non-significantly skew (Tabachnick and Fidell, 2007). All

of the Parent BERS-2 measures were negatively skewed, as well as the following Parent report subscales on the DECA; attachment, initiative, protective factors, and self control. The parent report hyperactivity subscale on the SDQ was also negatively skewed. These variables were reflected before transformation, and then re-reflected to retain their direction. Only the BIQ social novelty scale could not be transformed with this method, this variable was transformed using the best power transform using the Box-Cox procedure (Box & Cox, 1964). The optimal power for this variable was 0.72. Significant outliers were winsorized at 3 standard deviations to reduce their influence on analyses (Tabachnick & Fidell, 2007).

Insert Table 2 here.

Insert Table 3 here.

Exploratory Factor Analysis – Parent data

An exploratory factor analysis was conducted on all measures using principal axis factoring with oblimin rotation. Examination of the scree plot (Figure 1) showed potentially 5 factors with eigenvalues > 1, and a discontinuity after the fifth factor. Examination of both the four- and five-factor solutions revealed an identical factor structure for the first 4 factors, while the 5th factor comprised only a single variable; the DECA protective factors scale, which loaded more strongly on the second than on the 5th factor, and therefore the four-factor solution was preferred in the interest of interpretability.

Insert Figure 1: Scree Plot here.

Examination of the factor loadings (table 4) for the oblique factor solution revealed a simple structure. Based on the interpretation of the factor loadings, the first factor was labeled behavioural and emotional functioning as it comprised only of 5 items from the BERS-2 scale, the second was labeled behavioural difficulties (as it positively loaded behavioural problems from the SDQ (4 items) and DECA (5 items), and negatively loaded protective factors from both tests) the third was labeled Inhibition as it comprised the PAS social anxiety scale, the BIQ social and situational novelty scales, and the BIQ physical challenges scale, and the fourth factor was

labeled parenting stress as it comprised 6 items solely from the parenting stress index. After standardization of the items, Cronbach's alphas for the index items on each scale were .86 (factor 1), .88 (factor 2), .78 (factor 3), and .86 (factor 4). Intercorrelations between the factors are provided in table 5.

Insert table 4.

Insert table 5.

Baseline differences

Preliminary one-way ANOVAs on each of the factors revealed that there was no significant difference in the baseline scores for Factor 4, however significant baseline differences were identified between the groups on factors 1 through 3 ($F(2, 470) = 13.54$, $p < .001$ for factor 1, $F(2, 466) = 3.31$, $p = .037$ for factor 2, $F(2,470) = 17.33$, $p < .001$). For factor 1 the waitlist group scored significantly higher than either of the two treatment groups ($p < .05$), but the treatment groups did not differ significantly. For factor 2 (behavioural difficulties) the waitlist group scored significantly higher than the Fun Friends, but not the You can do it group ($p < .05$), while for factor 3 the waitlist group scored significantly lower than both of the treatment groups and in addition the You can do it group scored significantly higher than the Fun Friends group ($p < .05$). To account for this, the followup analyses for the group differences were performed using ANCOVA controlling for baseline scores as recommended by Rausch, Maxwell, and Kelley (2003).

Intervention Effects

A two-way linear mixed effects model was conducted examining each of the factor scores at three time points (pre-test, post-test and at 12 months follow-up) for each of the three groups (*Fun Friends, You Can Do It*, and Waitlist). Models included time as a categorical repeated measures factor, group as a categorical between-subjects factor, and participant identification and school as a random factor to account for the nested nature of the design. Models were compared using a variety of covariance structures as is recommended, including first-order autoregressive, compound symmetry and scaled identity and model selection was based upon the Akaike Information Criterion

(AIC). For factors 2-3 the first-order autogressive model provided the best fit, while for factors 1 and 4 the compound symmetry model provided the lower AIC.

Behavioural and Emotional Strength

Analysis revealed significant main effects of time for all factors ($F(2,939) = 453.84$, $p < .001$ for behavioural and emotional strength, $F(2,912.92) = 299.85$, $p < .001$ for behavioural difficulties, $F(2,971.14) = 289.99$, $p < .001$ for behavioural inhibition, and $F(2,897.89) = 55.32$, $p < .001$ for Parenting Stress). There were significant two-way interactions between time and group for factors 1 – 3 ($F(4,939.01) = 50.39$, $p < .001$ for BERS-2, $F(4,912.93) = 6.37$, $p < .001$ for behavioural difficulties, and $F(971.14) = 59.62$, $p < .001$ for inhibition).

For the three factors that exhibited a significant interaction, simple effects of time were examined for each of the three intervention groups. Analysis revealed that for behavioural and emotional strength, all groups improved significantly from pretest to post-test and continued to improve significantly from post-test to follow-up ($F(2, 310) = 352.59$, $p < .001$ for *Fun FRIENDS*, $F(2, 371.06) = 160.86$, $p < .001$ for *You Can Do It*, and $F(2, 258) = 31.21$, $p < .001$ for the Waitlist group). Controlling for baseline scores, the Fun Friends group improved significantly more than either the You can do it group ($p < .001$) or the Waitlist group ($p = .007$) at post-test, and improved significantly more than both other groups at follow-up ($p < .001$). The You can do it group improved significantly more than the Waitlist group at follow-up ($p < .001$) but not at post-test ($p = .061$).

Behavioural Difficulties

All groups differed significantly from pre-test to post-test, in terms of behavioural difficulties and continued to improve from post-test to follow-up $F(2,310) = 202.75$, $p < .001$ for Fun-Friends, $F(2,362) = 85.31$, $p < .001$ for *You Can Do It*, and $F(2,253) = 32.69$, $p < .001$ for the Waitlist group). Controlling for baseline scores, both the *Fun FRIENDS* group and the *You Can Do It* group improved significantly more than the Waitlist group at post-test ($p < .001$ and $p = .002$ respectively), while the Fun Friends and You can do it groups did not differ ($p = .095$). At follow-up, neither group improved significantly more than the waitlist, controlling for baseline scores, however

the Fun Friends group did improve significantly more than the You can do it group (p = .021).

Behavioural Inhibition

In terms of behavioural inhibition, both the *Fun FRIENDS* and the Comparison Group improved significantly from pre-test to post-test and then continued to improve significantly from post-test to follow-up ($F(2, 327.4) = 375.77$, $p < .001$ for *Fun-Friends*, and $F(2, 384.69) = 106.84$, $p < .001$ for *You Can Do It*), while the Waitlist group did not improve significantly from pre-test to post-test or from post-test to follow-up, but did have overall lower scores at follow-up than at pretest ($F(2, 260.68) = 3.23$, $p < .001$). Controlling for baseline scores, both the *Fun FRIENDS* and *You Can Do It* groups improved significantly more than the Waitlist group, and the Fun Friends group improved significantly more than the You can do it group both at post-test and at follow-up (all ps < .001).

Insert Figure 2: Four Factor Scores at Pre, Post and 12 month Followup here.

Comparison of the Fun-Friends intervention for high-versus low-anxious children

To establish whether the Fun-Friends intervention was significantly more effective for high-anxious than for low-anxious children, those children scoring in the top third on the PAS total score were compared to those scoring in the bottom third of the group. Two-way linear mixed effects models were conducted comparing the high- and low-anxious children in terms of their intervention gains, and the interaction term was examined to determine whether a significant difference in improvement existed according to the basline anxiety of the child.

Significant interactions were found for the behavioural and emotional strength factor ($F(2, 184.19) = 5.16$, $p = .007$) the behavioural difficulties factor ($F(2, 189.54) = 4.32$, $p = .015$), and the behavioural inhibition factor ($F(2,179.42) = 15.48$, $p < .001$). Followup simple effects for the BERS-2 factor demonstrated that both high- and low-anxious children improved significantly from pretest to post-test and from post-test to follow-up, however this improvement was greater for the high anxious children.

Examination of figure 3 shows that although the high anxious children initially displayed lower scores than the low-anxious group, by the followup time point both groups had equivalent scores.

Insert Figure 3: Levels of Social and Emotional Competence at Pre, Post and Follow-up for the *Fun FRIENDS* group here.

Follow-up simple effects of time for the Behavioural difficulties factor showed significant intervention effects for both the high-anxious group ($F(2, 106.45) = 43.85$, $p < .001$) than for the low-anxious group ($F(2,74.2) = 44.4$, $p < .001$). Both high- and low-anxious groups improved from pretest to post-test, and both reverted to some extent at followup, but were still significantly improved relative to baseline. The high anxious group however experienced slightly more improvement (and reverted slightly more) than the low anxious group (see figure 4).

Insert Figure 4: Levels of Behavioural Difficulties at Pre, Post and Follow-up for the *Fun FRIENDS* group.

Follow-up simple effects of time for the Inhibition factor showed greater intervention effects for the high-anxious group ($F(2, 224.15) = 194.26$, $p < .001$) than for the low-anxious group ($F(2, 224.15) = 107.79$, $p < .001$). Both high- and low-anxious groups improved from pretest to post-test, but only the high-anxious group continued to improve from post-test to follow-up. For the Inhibition measure the high-anxious group did not reach the same performance level as the low-anxious group (figure 5).

Insert Figure 5: Levels of Behavioural Inhibition at Pre, Post and Follow-up for the *Fun FRIENDS* group.

Teacher Protective factors rating

A two-way linear mixed effects model conducted on the teacher ratings of the DECA protective factors scale. Analysis revealed a significant main effect of time, $F(2,904.54) = 32.68$, $p <.001$. Analysis also revealed a significant time*group interaction, $F(4,904.55) = 8.699$, $p <.001$, shown in Figure 5. Only the *Fun FRIENDS* group changed significantly over time, $F(2,284) = 35.69$, $p <.001$. The *Fun FRIENDS*

group improved significantly from pretest to post-test, and maintained this level of function at follow-up. Controlling for baseline differences, the Fun FRIENDS group improved significantly more than either the You can do it group or Waitlist group at both post-test and follow-up (ps < .001), while the You can do it and Waitlist groups did not differ significantly.

Insert Figure 5: Teacher Protective Factors at Pre, Post and Follow-up for the *Fun FRIENDS* group, here.

A supplementary analysis was then conducted comparing teacher and parent ratings of the DECA protective factors. The analysis revealed a significant large main effect of respondent, such that parents overall rated the protective factors scale higher than did teachers $F(1,751.43) = 334.76$, $p < .001$, as well as a main effect of time, $F(2,745.78) = 433.93$, $p < .001$, and a significant two-way interaction between respondent and time $F(2,745.78) = 192.14$, $p < .001$. There were significant simple effects of time for both parents, $F(2,309.13) = 916.63$, $p < .001$, and teachers, $F(2,282.82) = 38.76$, $p < .001$. For both kinds of respondents, the post-test scores differed significantly to pretest scores, and follow-up scores did not differ significantly to scores at posttest. Parents however showed significantly larger intervention effects than did teachers.

Insert Figure 6: Comparison of Teacher and Parent Ratings of Protective Factors for the *Fun FRIENDS* group, here

Comparison of mother and father distress ratings

A two-way linear mixed effects model comparing mother and father ratings of parental distress revealed a very large main effect of respondent, $F(1,713.661) = 4173.673$, $p < .001$, such that fathers rated their distress a great deal higher overall than did mothers. There was also a significant main effect of time, $F(2, 698.55) = 24.92$, $p < .001$, such that scores improved significantly from pretest to post-test for both groups, but did not change from post-test to follow-up. There was no significant interaction between the factors, $F(2,695.87) = 2.13$, $p = 0.119$. Refer Figure 6

Insert Figure 7: Comparison of Mother and Father Levels of Parental Distress, here.

Discussion

This study was the first to examine the effectiveness of a universal school based delivery of the *Fun FRIENDS* program with children aged 4-7 years. The findings provide promising support for early intervention models for reducing anxiety and increasing social and emotional strength in this population regardless pre-intervention anxiety symptomatology. This has important implications for the prevention and treatment of anxiety in early childhood as it suggests that classroom based universal early intervention programs are sufficient to produce clinically significant change. The fact that intervention gains were maintained 12 months post intervention provides further support and provides evidence for the importance of preventive universal intervention in early childhood. Given that formal education in early childhood has a clear focus on social-emotional development, prevention programs that target emotional regulation and social competence have the potential to reinforce skill acquisition during the optimal developmental period (Humphries & Keenan, 2006). A review of the main findings shows that compared with children in the WL condition, children in the two active conditions demonstrated greater symptom reduction and enhancement of social and emotional competence. Overall, both active intervention conditions appear to have produced significant and comparable gains, however the *Fun FRIENDS* intervention produced greater improvements at post and follow up. The results have clear implications for early intervention, providing support for the positive impact of the *Fun FRIENDS* program in terms of enhancing social and emotional competence in this population. Delays or impairments in emotional regulation and social competence are associated with maladaptive coping behaviour and increased risk of childhood psychopathology including anxiety disorders (Southam-Gerow & Kendall, 2002).

Another finding of the study demonstrated significant decreases in BI from pre to post assessment and at 12 month follow up for the IG suggesting that changes in anxiety can positively impact BI. Research indicates the enhancement of a child's ability to regulate emotional reactivity may contribute to a resilience process and subsequently lead to decreases in BI, and potentially reducing symptoms of anxiety (Ballespí, Janeé & Riba, 2012).

A significant finding of the study was that fathers rated levels of parental distress and negative perceptions of their child's behaviour a great deal higher overall than did mothers, however both mothers and fathers showed significant improvements over time. This may occur through the process of enhancing parental confidence and fostering heightened awareness. Improved insight may translate into flexibility of maladaptive parenting attitudes and behaviours such as over control and over protection. Further by teaching parents positive coping strategies to assist their children to regulate emotions, this may result in a decrease in frustration and greater understating of their child's anxiety. These results provide support for the inclusion of parents in interventions for young children with anxiety, and has implications for behavioural difficulties as the study had a positive impact on behavioural issues post intervention. Whilst this was not a specific objective of the intervention this is an important finding given the negative impact on bullying and difficulties with peer relationships on development and psychosocial functioning.

A comparison of high versus low anxiety in the active group showed that despite differing baseline scores pre assessment, both groups achieved a comparatively positive response post intervention with continued improvement at 12-month follow-up. Further analysis on the high versus low anxiety groups demonstrated decreased BI for both groups, with only the high anxious group maintaining improvements at 12 month follow-up. This finding may suggest that independent of risk status it is possible to positively impact levels of behavioural inhibition and enhance positive coping behaviour for highly anxious children through a universal intervention. However the dose requirements for children presenting with high behavioural inhibition may be greater than children with low levels at initial assessment.

In terms of protective factors both parents and teachers reported improvements in children's emotional and behavioural competence over time for the IG, with parents reporting larger improvements. Whilst there was a difference in the extent of improvement between parents and teachers, this concordance is important as it suggests that the *Fun FRIENDS* intervention facilitated by teachers in the school setting has the potential to enhance positive coping and resilience across contexts.

Limitations

There were a number of limitations of this study. First, the lack of adherence and social validity data may have implications for the validity of some of the findings. It is recommended that future studies include both adherence and social validity assessment. Likewise there may have been an issue with the continuity or delivery of the program given the number of teachers involved. Secondly, the level of missing or incomplete data represents a significant limitation. It is likely that much of this missing data is related to the length of the questionnaires and the fact that the schools allocated to the 12-month wait list did not have any short-term incentive to participate. It is recommended that future researchers address this issue in the form of incentive or by offering assessment via telephone or Internet. Lastly there may have been some issue with consistency regarding the number of participating classes per school which may have impacted on results.

Strengths

A strength of the study was the methodology employed because of the inclusion of both a comparison, 12-month waitlist group and allows for more control of maturation and other factors that may impact results. Further, the inclusion of asset based as well as deficit measures is also of value, as the focus of the intervention is not simply to achieve reduction in symptoms but also promotion of optimal wellness and positive coping through skill acquisition.

The *Fun FRIENDS* program is a manualised program. The use of a facilitators manual outlining the important components of the intervention, balanced with the opportunity for facilitators to be flexible and creative while tailoring the intervention is an advantage and addresses the criticisms associated with other manualised programs (see Addis, Cardemil, Duncan & Miller, 2006; Addis & Krasnow, 2000). This approach to intervention is consistent with Kendall and Beidas's (2007) call for "flexibility within fidelity" an umbrella term referring to the application of central components of intervention, whilst customising to the child (Kendall, Settpiani & Cummings, 2012).

A further strength of the study is the inclusion of both mother and father measures of anxiety and distress. This is of value due to the relative neglect of the father's role in

early child childhood anxiety with recent research showing a child's reactive temperament has an adverse effect on father's parenting in particular (Bögels & Phares, 2008; Majdandžić, de Vente, Feinberg, Aktar & Bögels, 2011).

Future Directions

Summary

The majority of school based prevention programs have focused on older children and adolescents. Given the high prevalence and early onset of anxiety disorders, there may be significant advantages in preventive intervention targeting young children in an attempt to avoid significant suffering and impairment. Findings from this trial of the *Fun FRIENDS* intervention provide preliminary support for the effectiveness of universal implementation of the program in schools, for children with varying levels of pre intervention anxiety. Improvements in behavioural inhibition, social and emotional competence and reductions in behavioural difficulties were observed in addition to decreases in levels of parenting distress. The next step in evaluating the effectiveness of this program will be to replicate the findings, conducting a randomised controlled trial with long term follow up and the inclusion of additional measures. There are a number of implications of this study, which are discussed.

It is recommend that future studies may benefit from designing psycho educational sessions, either briefer or enhanced accessibility for parents via internet or phone to improve parental participation. This may have increased benefits for child and parental anxiety and may enhance maintenance of treatment gains. Furthermore, longer term follow-up of more than two years is recommended in an attempt to detect real prevention effects as the literature suggests that follow up of this length is required in order to ascertain prevention effects (Humphries & Keenan, 2012).

Given our limited understanding of the aetiologial models for anxiety in preschoolers the inclusion of measures such as parenting behaviour and parent-child interactional processes is also recommended. Given the importance of the relationship between childhood anxiety and parental attitude further research is required to assess whether changes in emotional regulation mediates changes in anxiety. This study demonstrates that a low costs, universal intervention is effective at reducing anxiety and at the same

time addresses the multitude of barriers children and families face when accessing help.

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Tables

Table 1: Outline of the *Fun FRIENDS* Session Content

Session	Content of Session - Major Learning Objectives
Session 1:	• Developing a sense of identity, introduction to the group, name games. • Introduction of the concept of "being brave", social skills promotion. • Acceptance of differences
Session 2:	**F:** Feelings • Affective education and identification of various emotions, including recognition of physiological arousal associated with emotions.
Session 3:	**F**: Feelings (continued) • How to cope with feelings, thumbs-up ideas (helpful coping behaviours) and thumbs-down ideas (unhelpful coping behaviours) • Building on understanding the link between feelings and behaviour • Strategies to help others when they experience feelings, assists with development of empathy.
Session 4:	**R:** Remember to Relax • Identification of physiological arousal ("body clues") related to anxiety • Relaxation strategies are taught including, diaphragmatic breathings ("milkshake breathing"), progressive muscle relaxation and visualisation.
Session 5:	**I:** I can try my best! • Introduction to the cognitive components of the program. • Children are taught to become aware of and pay attention to their inner thoughts or self talk. • Self-talk is referred to in terms of "red" unhelpful thoughts and "Green" - helpful thoughts, using the traffic light analogy.
Session 6:	I: I can try my best! (continued) • Introduction to challenging unhelpful "red" thoughts and come up with alternative helpful green thoughts. • Application of green thoughts to help us achieve our goals.
Session 7:	**E:** Encourage • Try new things by breaking tasks down into small steps and using green thinking to help achieve goals.
Session 8:	**N**: Nurture • **Intr**oduce idea of role models and support teams, those people who help us to achieve our goals.
Session 9:	**D:** Don't Forget to be Brave • Support teams continued • Planning ahead for difficult situations.
Session 10:	**S:** Stay Smiling • Children dress up as their favourite brave person and celebrate their success in completing the program. Review strategies and skills
2 Booster Sessions	Review of *Fun FRIENDS* strategies and preparing for future challenges

Table 2: Demographics of the Intervention Group, Comparison and Waitlist Groups

		Intervention Type		
		Fun FRIENDS	*You Can Do It*	Waitlist
Age in years	Mean (SD)	5.21 (.76)	5.64 (.74)	5.41 (.51)
Number of fathers responding	N (%)	144 (90.57)	179 (91.33)	117 (87.97)
Number of mothers responding	N (%)	156 (98.11)	195 (99.49)	133 (100.00)
Gender	Female N (%)	95 (59.75)	101 (51.53)	75 (56.39)
	Male N (%)	64 (40.25)	95 (48.47)	58 (43.61)
Parent Income	0-29999 N (%)	7 (4.86)	8 (4.35)	1 (.82)
	30000-59999 N (%)	13 (9.03)	46 (25.00)	4 (3.28)
	60000+ N (%)	124 (86.11)	130 (70.65)	117 (95.90)

Table 3: Baseline scores for total scale measures across groups.

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	Fun Friends			You can do it			Waitlist		
	Pretest	Posttest	Followup	Pretest	Posttest	Followup	Pretest	Posttest	Followup
Father PSI total	68.71 (19.04)	66.17 (17.83)	64.79 (18.42)	66.25 (15.58)	63.6 (16.03)	66.47 (19.00)	69 (15.99)	65.05 (16.15)	64.32 (15.29)
Mother PSI total	66.12 (18.45)	66.12 (18.45)	65.64 (14.40)	69.98 (17.29)	69.98 (17.29)	71.52 (20.23)	69.42 (16.62)	69.42 (16.62)	65.58 (16.58)
Parent BERS total	118.02 (13.80)	130.73 (12.61)	125.11 (7.01)	120.13 (15.32)	126.7 (22.18)	111.1 (18.27)	126.11 (13.21)	133.46 (15.34)	109.29 (14.43)
Parent BIQ total	121.47 (15.66)	89.34 (21.14)	82.88 (15.47)	112.25 (20.34)	95.17 (23.08)	95.09 (16.12)	104.32 (23.14)	103.53 (21.79)	102.6 (14.32)
Parent DECA total	53.49 (13.03)	33.71 (12.64)	31.59 (10.81)	51.44 (16.61)	37.87 (14.97)	37.13 (15.82)	53.8 (14.78)	40.85 (13.31)	41.11 (15.88)
Parent PAS total	24.85 (10.54)	19.67 (11.47)	16.39 (9.92)	24.61 (11.53)	20.85 (12.60)	19.64 (12.00)	23.52 (12.03)	21.16 (12.54)	20.05 (11.40)
Parent SDQ total	3.75 (1.04)	4.04 (1.01)	7.79 (4.78)	3.59 (1.03)	4.04 (.88)	10.06 (7.51)	3.6 (1.12)	3.86 (1.06)	11.53 (8.86)
Teacher DECA total	54.18 (11.51)	27.68 (15.89)	24.26 (15.74)	56.54 (12.84)	33.22 (20.29)	31.94 (20.38)	51.45 (11.12)	30.41 (17.20)	29.02 (17.43)

Table 4. Factor loadings for all variables.

Variable	Factor1	Factor2	Factor3	Factor4	Communality
Parent BERS school functioning	**0.8056**	0.00594	0.183366	0.022769	0.601150383
Parent BERS interpersonal strength	**0.788575**	-0.01921	0.029169	-0.06082	0.630285458
Parent BERS family involvement	**0.719845**	-0.00114	-0.07523	-0.00568	0.598239116
Parent BERS intrapersonal strength	**0.705885**	0.048417	-0.27867	0.075529	0.683364969
Parent BERS affective strength	**0.675473**	0.000762	-0.135	0.042165	0.565952893
Parent SDQ conduct	0.033037	**0.923749**	-0.03606	0.053813	0.857935022
Parent DECA withdrawal depression	-0.02115	**0.902164**	0.072234	0.064208	0.817683922
Parent DECA initiative	-0.05961	**-0.86908**	-0.05623	0.152223	0.763272273
Parent SDQ prosocial	0.029906	**-0.85441**	0.161768	0.028927	0.765226912
Parent SDQ hyperactivity	-0.07144	**0.783299**	-0.08303	0.029937	0.650242228
Parent SDQ peer	-0.07368	**0.748023**	0.057002	0.008732	0.572975048
Parent DECA protective factors	-0.1168	**-0.70576**	-0.09928	0.089875	0.511057457
Parent DECA emotion	-0.08716	**0.63736**	0.046898	0.16785	0.486078058
Parent DECA self control	0.047148	**0.601088**	-0.05517	-0.08784	0.394650672
Parent PAS social anxiety	-0.02078	0.063859	**0.702643**	0.123218	0.515401818
Parent BIQ situational novelty unfamiliar situaitons	-0.03351	-0.09836	**0.655785**	-0.09594	0.484543362
Parent BIQ social novelty adults	0.046762	-0.01508	**0.634691**	-0.04201	0.472895213
Parent BIQ social novelty performance situations	-0.04628	-0.00606	**0.548309**	-0.05555	0.388082968
Parent BIQ physical challenges	0.01862	-0.01195	**0.513417**	-0.03411	0.308659006
Father defensive responding total	0.136551	0.006821	0.013248	**0.825338**	0.601087688
Father parental distress total	0.091725	-0.03362	-0.0179	**0.798265**	0.573433954
Mother defensive responding total	-0.05078	-0.07141	0.041914	**0.676589**	0.524578246
Mother parental distress total	-0.08017	-0.05883	0.038088	**0.647695**	0.499797143
Father parental child dysfunction total	-0.09069	0.084023	-0.00555	**0.615629**	0.442473447
Father difficult child total	-0.22131	0.037473	0.007833	**0.556964**	0.461347798
Mother difficult child total	-0.45329	0.025077	0.059565	0.439596	0.521885797
Mother parental child dysfunction total	-0.36175	0.087973	0.00291	0.416664	0.405707409
Parent PAS gad	-0.09776	0.142306	0.468272	0.196982	0.281696658
Parent PAS ocd	-0.1507	0.055307	0.300461	0.194429	0.174355126
Parent DECA aggression	-0.26973	0.042866	-0.03751	0.100973	0.087877949
Parent PAS physical injury fears	-0.06319	-0.06809	0.441403	0.085419	0.194474389
Parent SDQ emotion	-0.09161	-0.04888	0.033589	0.063493	0.019941335
Parent BIQ situational novelty preschool sep	0.053775	-0.00211	0.442175	0.06271	0.169607487
Parent DECA attention	-0.40169	-0.0433	-0.09997	0.048832	0.146411271
Parent PAS separation anxiety	-0.13412	-0.07893	0.384543	0.035158	0.16370326
Parent BIQ social novelty peers	0.12382	-0.04986	0.152979	0.034964	0.032825758
Parent DECA attachment	-0.13719	-0.46121	-0.12301	0.013689	0.217516665

Table 5. Intercorrelations between the factors.

	Factor 2	Factor 3	Factor 4
Factor 1	0.06	0	-0.03
Factor 2	.	-0.45	0.27
Factor 3		.	-0.3
Factor 4			.

List of Figures