A Universal Prevention Trial of Anxiety Symptomology during Childhood: Results at 1-Year Follow-up

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In 2001 we evaluated a universal prevention trial of anxiety during childhood, and also examined the effects of the program on levels of depression. Participants were 594 children aged 10–13 years from seven schools in Brisbane, Australia, who were randomly assigned to an intervention or control group on a school-by-school basis. The intervention was based on the group CBT program FRIENDS (Barrett, Lowry-Webster & Holmes, 1999a, 1999b, 1999c). Results were examined universally (for all children) and for children who scored above the clinical cut-off for anxiety at pre-test. At 12-month follow-up, intervention gains were maintained, as measured by self-reports and diagnostic interviews. Eighty-five per cent of children in the intervention group who were scoring above the clinical cut-off for anxiety and depression were diagnosis free in the intervention condition, compared to only 31.2% of children in the control group. Implications of these findings are examined, alongside limitations and directions for future research.

A number of published studies have provided empirical support for both individual and group CBT treatment as being more effective than a waitlist condition for reducing anxiety when implemented by extensively trained and supervised clinicians, (Barrett, Dadds, & Rapee, 1996; Barrett, 1998; Cobham, Dadds, & Spence, 1999; Dadds, Holland, Barrett, Laurens, & Spence, 1997; Flannery-Schroeder & Kendall, 2000; Mendelowitz et al., 1999; Kendall, 1994; Kendall et al., 1997; King et al., 1998; Last, Hanson, & Franco, 1998; Shortt, Barrett, Dadds & Fox, 2001; Silverman et al., 1999). These independent clinical trials indicate that anxiety disorders in late childhood and early adolescence can be effectively treated. Yet of those in need of mental health services, less than 20% receive appropriate care, with children in need not being reached, long waiting lists and no-show rates and family dropouts sometimes exceeding 50% (Day & Roberts, 1991; Tuma, 1989; Weist, 1999; Zubrick et al. 1997).

Subsequently, over the last few years, prevention has been touted as the most important direction for researchers and clinicians to focus on in dealing with anxiety disorders during childhood and adolescence (Dadds et al., 1997; King, Hamilton, & Murphy, 1983; Munoz, 2001; Spence, 1994; Spence, 2001). Controlled preventive interventions are only slowly beginning to emerge. For example Dadds, Spence, Holland, Barrett, and Laurens (1997), conducted the first controlled prevention trial with a community cohort of anxious children. This project employed a combined indicated[1] and selective[2] approach to the development of anxiety disorders in young people. We aimed to provide a comprehensive coverage of children, including those who were disorder free but showed mild anxious features, through to children who met diagnostic criteria for an anxiety

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disorder, but at a low level of severity. Immediately following completion of the program, no significant differences were evident between the two groups. However, at 6-month follow-up, the results demonstrated not only a significant reduction in existing anxiety, but also a prevention effect, where 58% of children in the monitoring group progressed to a diagnosable disorder, compared to only 16% of the intervention group. Moreover, even at 24 months follow-up these improvements were maintained in the intervention group only (Dadds, Holland, Barrett, Laurens, & Spence, 1999). Examination of predictors of chronic anxiety showed that being female and parental anxiety were predictive of an anxiety disorder at posttreatment, while children with high levels of internalising symptoms at pretreatment and children in the monitoring group were more likely to have an anxiety disorder at posttreatment and at 2-year follow-up.

Overall, these results are promising, particularly given the design of the study (randomised trial) and the use of diagnostic classifications as outcome measures. As such, this trial demonstrated that anxiety disorders can be ameliorated and prevented, avoiding the high levels of subjective distress for individuals and their families, and the negative long-term consequences in terms of disruption to relationships, schooling and vocational development.

Similarly the few other selective based prevention programs reported in the literature with internalising problems in young people (i.e., depression: Jaycox, Reivick, Gillham, & Seligman, 1994; and shyness in preschoolers: La Frenier & Capuano, 1997) also found positive results when implemented by specialist staff. Despite these encouraging results, this model of prevention has a number of limitations inherent in its design. That is, a labelling or stigmatising effect may have been created because the studies were based on identifying individuals "at risk" for anxiety or depression, and therefore may run contrary to the intention of promoting children's self confidence and esteem. Further, the Jaycox et al. (1994) study encountered difficulties in recruiting and maintaining the attendance of participants as the program was implemented outside of normal school hours. Hence, those students that remained in the study could potentially manifest a self-selection bias, being only the most motivated and committed children and families. Both the identified ethical problems of labelling, and attendance difficulties could be substantially reduced if future studies implemented prevention programs routinely as part of the school curriculum (i.e., universal prevention model).

Inspired by these findings, we conducted a universal prevention trial of childhood anxiety aimed to evaluate the potential of these interventions when implemented by trained school teachers to all children as part of the school curriculum (Lowry-Webster, Barrett, & Dadds, 2001). Schools rather than participants were selected as the unit of random assignment and the schools were assigned to either the waitlist control or intervention groups. The intervention was based on the FRIENDS for children program, (Barrett, Lowry-Webster, & Holmes, 1999a, 1999b, 1999c), which is a brief cognitive-behavioural intervention initially designed and validated as a group-based treatment for clinically anxious children (Shortt et al., 2001). Given the non-clinical nature of this sample, this study sought to examine the preventive effects of the intervention on those children considered to be "at-risk" (i.e., scoring above the clinical cut-off on the Spence Children's Anxiety Scale; Spence, 1997). The study further aimed to explore the effectiveness of the anxiety prevention program on children's depression. The existence of a strong relationship between anxiety and depression in childhood has been widely demonstrated (Cole et al., 1998; Katon & Roy-Byrne, 1991, Orvaschel, Lewinsohn, & Seeley, 1995).

At post-intervention, results revealed that children in the FRIENDS intervention group reported fewer anxiety symptoms regardless of their risk status, than the comparison group at posttest. In terms of reported levels of depression, only the high anxiety group who completed the FRIENDS intervention evidenced improvements at posttest. As such, the results of this study demonstrate that the FRIENDS for children program can be successfully delivered to a universal school-based population and integrated into the classroom curriculum when

implemented by trained and supervised teachers. These findings advance research conducted by Dadds et al. (1997) by demonstrating that targeting all children in a grade, rather than the potentially detrimental impact of identifying and intervening with only children "at risk", still produces positive effects. These preliminary results are especially promising in view of one of the frequently reported disadvantages of a universal intervention. That is, given the moderately low dosage participants receive in a universal intervention (in comparison to a indicated, selected or treatment interventions), children "at-risk" of anxiety might not receive sufficient exposure (duration or intensity) to alter their pathological developmental pathway (Greenberg, Domitrovich, & Bumbarger, 1999). The initial trends demonstrated in this study suggest that intervention participants do receive sufficient exposure in universal prevention programs.

In this article, we report the results for children involved in the teacher implemented universal anxiety prevention program 12 months later. Specifically, this study sought to examine whether children involved in the program benefited from being members of the group in terms of reductions in anxiety and depression problems as measured by self-report, parent report, and diagnostic outcomes 1 year later. Given that parent reports were not available at the time of the first published paper on this study (Lowry-Webster et al., 2001), pre- and post- and 12-month follow-up data will be presented for parental measures.

Several hypothesises are made. First, it was hypothesised that at 12-month follow-up, the intervention group would be associated with lower rates of anxiety and depression compared to the monitoring group whereby anxiety and depressive levels are predicted to remain stable. Second, it was hypothesised that at 12-month follow-up the high anxious children in intervention group would be associated with lower rates of depression, compared to the monitoring group whereby depressive levels are predicted to remain stable or increase slightly. Third, it was hypothesised that at 12-month follow-up, the intervention group would be associated with lower rates of anxiety and depressive diagnoses, compared to the monitoring group whereby the number diagnoses of anxiety and depression are predicted to be greater. A fourth objective was to examine factors that predicted maintenance effects. The specific aim was to examine whether age, gender, group and pre-intervention anxiety and depression scores predicted risk group status at post-intervention and 12-month follow-up (Dadds et al., 1999).

A detailed review of the literature also shows that program acceptability has been largely ignored by applied researchers in general, and by researchers working with children and adolescents in particular (Barrett, Shortt, Fox & Wescombe, 2001; Moncher & Prinz, 1991; Mental Health Working Group on Prevention Research, 1995; Schwartz & Baer, 1991).

Traditional outcome research has paid considerable attention to other key methodological issues (e.g., experimental design, reliability of measurements, and statistical power) but has more often assumed, rather than demonstrated the acceptability of (or consumer satisfaction with) treatment procedures (Barrett, Shortt, Fox, & Wescombe, 2001). Program acceptability is important given that consumer reactions regarding the ease of understanding and the utility of program components are important aspects of treatment development and clearly warrants increased research attention. With this study we aimed to discover more about the program's acceptability to children and parents.

Method

Participants

Because details of the methodology procedures are described in the Lowry-Webster et al. study (2001), only critical details are presented here. Five hundred and ninety-four children (314 females and 280 males) aged between 10–13 years were recruited from grades 5 to 7, from seven Catholic schools in the Brisbane metropolitan area. Children and their parents were allocated to the intervention or waitlist condition on the basis of their school. This resulted in 432 children (234 females and 198 males) in the FRIENDS intervention condition and 162 children (80 females and 82 males) in the waitlist control condition. Parents of these children were

also invited to participate in three parent evenings (the family component).

Measures

All children and parents completed a battery of self-report questionnaires at three different points in time (pre-intervention, post-intervention and 12-month follow-up).

Children's Anxiety and Depression Measures

Spence Children's Anxiety Scale (SCAS; Spence, 1997). The SCAS is a 45-item child self-report measure designed to evaluate symptoms relating to separation anxiety, social phobia, obsessive-compulsive disorder, panic attack and agoraphobia, generalised anxiety, and fear of physical injury for 8- to 12-year-olds. Children were asked to rate, on a 4-point scale ranging from *never* (0) to *always* (3), the frequency with which they experienced each symptom. This measure was selected because of its ability to reliably discriminate clinically anxious children from non-anxious controls, and because the scale was normed on an Australian population. The clinical cut-off for this scale is 42.48 (Spence, 1994). Sound psychometric properties have been achieved and reported by Spence (1997, 1998). Specifically this measure has been found to have high internal consistency (r = .92), high split half reliability (r = .90), adequate test–retest reliability (r = .60), as well as showing good convergent and divergent validity.

Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978). The RCMAS provides a measure of a child's chronic anxiety and is commonly used in previous research. The questionnaire contains 37 items, nine of which form a Lie scale. For each item, the child is asked to respond "yes" or "no". This measure has been found to have high internal consistency and test–retest reliability, as well as showing convergent and divergent validity (James, Reynolds, & Dunbar, 1994; Reynolds & Richmond, 1985; Wisniewski, Mulick, Genshaft, & Coury, 1987).

Children's Depression Inventory (CDI; Kovacs, 1981). The CDI is the most widely used measure of childhood-depressed affect (Cole & Turner, 1993), and has extensive support for its reliability and validity in children from ages 7 to 17 years (e.g., Saylor, Finch, Spirito, & Bennett, 1984). The CDI consists of 27 items whereby each item consists of three statements of different severity, and requires the child to choose one statement that best describes him or her. Each item is scored from 0–2, and the sum of all item scores yields the total CDI score. Therefore, scores range from 0–54, with higher scores indicating more depressive symptoms. For the CDI, previous research has suggested that scores above 17 indicate a high likelihood of significant depressive symptomatology (Craighead, Curry, & Ilardi, 1995)

Anxiety Disorders Interview Schedule for Children (ADIS-C third edition; Silverman & Albano, 1997). The diagnostic categories of the ADIS-C correspond to those used in the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV*; American Psychological Association, 1994). In addition to a diagnosis, a clinical severity rating is also given based on the child's interference ratings, total symptoms endorsed, and clinician assessment of level of disturbance and disability produced. The scale ranged from 0 (*none*) to 8 (*very severely disturbing/disabling*). Although parallel parent forms of the ADIS are available, resources for the present study were not sufficient to enable both parent and child versions to be conducted. The extensive use of this instrument in research has facilitated communication between different groups of researchers. Research indicates that ADIS-C provides reliable and valid assessment of symptoms across multiple symptom domains (Silverman & Eisen, 1992). Inter-rater reliability of the ADIS-C has been shown to be moderate to high (Cobham, Dadds, & Spence, 1998; Rapee, Barrett, Dadds, & Evans, 1994; Spence, Donovan, & Brechman-Toussaint, 1999) with kappa coefficients for anxiety disorder categories ranging from .82 to .96.

The Child Behaviour Checklist- Revised (CBC — Revised; Achenbach & Edelbrock, 1991). Parents were asked to complete the CBCL — Revised. This measure is 118 items in length, with parents' rating each item on a 3-point scale. For these items, a total problem behaviour

score can be derived, as well as several subscale scores, and scores on two dimensions of dysfunction: internalising and externalising. Only the internalising and externalising scale scores were used in this study. Research has shown these scales to be psychometrically sound, with high test–retest reliability and internal consistency reported (Achenbach & Edelbrock, 1991). Support for the content, construct and criterion-related validity of the CBCL has also been found (Achenbach & Edelbrock, 1991).

Treatment Acceptability Measures

Additional ratings were collected at the end of the intervention in order to further assess the social acceptability of the intervention for participants, parents, and their teachers, a factor that is often ignored by other researchers. To ensure anonymity and encourage participants the freedom to respond as honestly as possible, they were not asked to write any identifying information on the questionnaires.

FRIENDS Child Social Acceptability Measure (Barrett, Lowry-Webster, Turner & Johnson, 1998). Children were asked to rate how much they enjoyed the FRIENDS program (1 = A lot, 2 = Some, 3 = A little, 4 = Not at all), how much they learnt about feelings and how to cope with them (1 = A lot, 2 = Some, 3 = A little, 4 = Nothing at all), and how often they use the skills taught during the FRIENDS program (1 = All the time, 2 = Some of the time, 3 = Not very often, 4 = Not at all). Participants were also asked to indicate which activities from the FRIENDS program they found most useful.

FRIENDS Parent Social Acceptability Measure (Barrett, Lowry-Webster, Turner, & Johnson, 1998). This measure was a questionnaire focusing on the parents' final evaluation of the FRIENDS program using a 5-point scale from 1 (*not useful/not important/not at all*) to 5 (*very useful/very important/a lot*). The first set of three items related to how useful and important parents rated programs such as the FRIENDS program. The next set of four items asked parents to rate how enjoyable and helpful FRIENDS was in enhancing both the child's and parents coping skills and how much they felt their child had learnt during the program. The final three questions asked parents how often they, along with their children, used the skills taught in the FRIENDS program.

FRIENDS Teacher Acceptability Measure (Barrett, Lowry-Webster, Turner, & Johnson, 1998). This measure was designed to assess teachers' acceptance of, and experiences with, the FRIENDS program. Participants were required to circle the response that best reflected their answer using a 4-point Likert scale. The measure consisted of nine items related to their perceived usefulness of the program for children, how much they perceived children learnt about feelings and how to cope, the ease of implementing the program into their setting, and how well the program complimented their existing school curriculum.

Procedure

Pre-intervention assessments (referred to forthwith as PRE) involved the completion of self-report measures by all participating children.[3] This phase took place within normal class time. Postgraduate psychology students ran the class assessment sessions with standard instruction*s* To control for reading difficulties and to prevent children missing or skipping questions, the postgraduate student facilitating the assessment session read the instructions and questions aloud to all students.

Teacher Training Workshop

The teacher training involved an intensive full-day workshop. Seventeen teachers (7 males and 10 females) representing the four intervention schools participated in the full day teacher training workshops. The number of years experience in the profession ranged from 3 to 30 years (M = 12.29, SD = 6.67). Topics for training included anxiety disorders and their risk factors, principles of prevention, a step-by-step guide through the FRIENDS program (Barrett, Lowry-Webster, & Holmes, 1999a), ethical issues involved with running groups with children, and group leader and group process skills (encouraged through role plays and experiential exercises). All training manuals, training aids, handouts, exercises, discussion questions, videos

and overheads were standardised across training workshops via a training manual and resource kit (Barrett, Lowry-Webster, & Holmes, 1999c).

Group Leaders each received a copy of the *Friends for Children Group Leader Manual — Edition II* (Barrett, Lowry, & Holmes, 1999a). The manual describes the goals and strategies for each session, the desired outcomes and the specific exercises to be used in meeting these outcomes. Random videotaping of the sessions and self-ratings of integrity using the FRIENDS integrity checklist were conducted to ensure program integrity and no significant departures from the prescribed program manual were noted.

Intervention Group (FRIENDS)

Following pre-intervention screening and teacher training the FRIENDS program (Barrett, Lowry-Webster & Holmes, 1999a–c) was commenced in the intervention schools. The FRIENDS program was implemented routinely as part of the school curriculum to whole classes of children during normal school hours. Specifically, the intervention was scheduled to run for 75 minutes during usual pastoral care or social studies classes for 10 weeks, with one session held each week. The FRIENDS program also comprised of two booster sessions implemented at one month and three months following the initial intervention.

The FRIENDS program originated from the *Coping Koala* anxiety treatment program (Barrett, Dadds, & Rapee, 1991) and Kendall's (1990) *Coping Cat* anxiety treatment program. The Coping Koala and its original source have been described in detail elsewhere (Barrett et al., 1996; Kendall, 1994; Kendall & Treadwell, 1996). The FRIENDS prevention program is a family based CBT program, which teaches children strategies for coping with anxiety and challenging situations within a group format. These strategies centre on the FRIENDS plan, which incorporates physiological, cognitive and behavioural coping strategies. The word FRIENDS is an acronym that assists participants to remember the coping steps to take; F, for what am I *F*eeling? R for learning to *R*elax and feel good, I for *I*nner thoughts, E for *E*xplore plans of action, N for *N*ice work reward yourself, D for *D*on't forget to practise, and lastly, S for *S*tay cool and calm! While retaining the core component of CBT for childhood anxiety (exposure, relaxation, cognitive strategies and contingency management), the FRIENDS program also has a number of unique features. First, the FRIENDS program emphasises peer support and peer learning. Children are encouraged to make friends and to build their social support networks. Second, the program includes attentional training for children, a procedure used in the treatment with adults with anxiety problems (Rapee & Sanderson, 1998; Wells & Butler, 1997), and encourages children to make internal attributions about their accomplishments. Participants were each given a *Friends for Children Workbook* (Barrett, Lowry, & Holmes, 1999c).[4] The workbook allowed participants to apply each of the skills taught to their own life situation. Group processes were used to help children learn positive strategies from each other, and reinforce individual efforts and change. To generalise the skills introduced in the sessions, homework tasks were assigned to each session, and participants were required to bring completed home activities to the following sessions.

FRIENDS for Parents

The trained classroom teachers also conducted three parent sessions at their schools. These sessions were conducted at separate times to the child program, at a time convenient to their individual school setting. Sessions 1 and 2 addressed what the children were learning in the FRIENDS program. Parents were encouraged to practise the skills learned in the FRIENDS program as a family, on a daily basis. In this session parents were also shown how they could use these skills to manage their own anxiety. Session 3 introduced parents to child management skills, and how to use these skills to manage their child's anxiety (e.g., reinforcement skills, planned ignoring, giving and backing up clear instructions). The family skills component also includes partner support training and encourages families to build supportive social networks.

Immediately after the FRIENDS intervention (referred to forthwith as POST), and again

12 months later (referred to forthwith as LT follow-up), both groups were re-contacted to collect the same dependent measures as outlined previously. Given the enormity of the universal sample within the proposed research, children's diagnostic status was measured using a long-term follow-up only design with children by administering the ADIS-C (Silverman & Albano, 1997). Children were selected based on their pre-intervention self-report scores. Initially, children scoring above the clinical cut-off for anxiety of 42.48 on the SCAS (Spence, 1994) or above the suggested cut-off for depression (above 17 CDI) at pre-intervention were to undergo diagnostic interviews (N = 118). However due to time and resource restraints, it was decided to only interview those children who scored above the cut-off on *both* measures (N = 62). This was supported by recent findings which found that children with comorbid disorders at pretest were more likely to retain an anxiety diagnosis at posttest and follow-up if left untreated (Shortt et al., 2001).

To ensure reliable diagnoses, a psychologist naïve to the interviewer's diagnoses, and school allocation (i.e., intervention school versus control school) reviewed 27% of the audio-taped interviews and made independent diagnoses. Accuracy of inter-rater reliability was calculated for diagnoses categorised as either no diagnosis, anxiety disorder or other diagnosis. This yielded kappas of .89.

Comparison Group

The comparison groups received no intervention but were told that they would be contacted for monitoring in 10 weeks and then at 1-year follow-up as a means to understand more about anxiety and fears during childhood. Safeguards were built into this design so that individual help was always available if needed.

Results

Attrition

Students were frequently away or absent from class and were not exposed to the entire program or assessment sessions As no specific measures were made of group session attendance, attrition in the current study was defined as any child who was absent from any of the assessment times. The rate of attrition was 21% over 12 months and did not differ by intervention status $\chi^2(1) = .54$, *ns* Retained children did not differ from those who were not retained on age $\chi^2(4) = 1.84$, *ns*, gender $\chi^2(1) = .74$, *ns* or severity of anxiety or depressive symptomatology $\chi^2(1) = .002$, *ns.*

Pre–Post Parental Reports

No significant effects were found on the parent rated CBCL internalising scale from pre-, to posttest, interaction $F(1, 302) = .50$,ns, $\eta^2 = .002$, condition $F(1, 302) = .006$, ns, $\eta^2 = .00$, phase $F(1, 302) = .06$, ns, $\eta^2 = .002$., for the control group (pre M = 55.03, SD = 12.31; post M = 54.97, SD = 13.06) and the intervention group (pre M = 55.82, SD = 12.62; post M = 54.50, SD = 12.15). Similarly, no significant effects were found for the externalising scale from pre to posttest, interaction $F(1, 302) = .38$, ns, $\eta^2 = .001$, condition $F(1, 302) = .16$, ns, $\eta^2 = 001$, phase $F(1, 302) = 2.74$, ns, $\eta^2 = .00$., for the control group (pre M = 46.58, SD = 11.16; post M = 45.55, SD = 12.30) and the intervention group (pre M = 47.85, SD = 9.82; post M = 45.59, SD = 10.53).

Intervention Maintenance (12-month follow–up)

To examine the durability of intervention effects a 2 (condition: intervention vs. waiting list control) × 2 (time: posttreatment vs. 12-month follow-up) repeated measures ANOVA was used. From post- to 12-month follow-up for scores for all children on the SCAS, a non-significant group by time interaction $F(1, 468) = .29$, *ns*, $\eta^2 = .001$ was found. However, a main effect for time $F(1, 468) = 7.10$, $p < .05$, $\eta^2 = .02$ and group was found $F(1, 468) = 50.05$, $p < .05$, $\eta^2 = .10$. Comparison of means showed scores for the intervention group to be lower than the scores for the control group at both phases, and 12-month follow-up scores to be lower than posttest scores. Table 1 shows comparisons of means for all children in the intervention and waitlist control group at pre- to post-intervention and 12-month follow-up.

When examining the effects for the high anxiety group, the repeated measures ANOVA revealed no significant interaction $F(1, 90) = 1.10$, *ns*, $\eta^2 = .01$.) or phase effect $F(1, 90) = .24$, *ns*, $\eta^2 = .01$. However, a significant effect for group was found $F(1, 90) = 13.84$, $p < .05$, $\eta^2 = 0.13$. Examination of the means indicated that the intervention group scored lower on the SCAS at both post-intervention and 12-month follow-up, indicating that the intervention group maintained its superiority over time.

On the CDI, the repeated measures ANOVA revealed no significant interaction, $F(1, 459) = 2.79$, *ns*, $\eta^2 = .006$, or effect for time, $F(1, 459) = 1.16$, *ns*, $\eta^2 = .003$. However a significant effect for group was found, $F(1, 459) = 7.21$, $p < .05$, $\eta^2 = .02$, with the intervention group scoring lower scores at both phases. When examining the effects for the high anxious group the repeated measures ANOVA revealed no significant interaction, $F(1, 82) = 2.06$, *ns*, $\eta^2 = .02$, or phase effect, $F(1, 82) = .05$, *ns* $\eta^2 = .00$; however, the condition effect was significant, $F(1, 82) = 4.31$, $p < .05$, $\eta^2 = .05$, with the intervention group reporting lower scores than the control group at both phases indicating that the intervention group maintained its superiority over time.

From post- to 12-month follow-up on the RCMAS the repeated measures ANOVA revealed no significant interaction, $F(1, 462) = .53$, *ns*, $\eta^2 = .001$, or phase effect, $F(1, 462) = 1.48$, ns, $\eta^2 = .003$. However, a significant main effect for group was found, $F(1, 462) = 16.78$, $p < .05$, $\eta^2 = .04$, with the intervention group scoring lower at both phases. When examining the effects for the high anxious group, the repeated measures ANOVA revealed no significant effects: interaction $F(1, 85) = 2.35$, ns, $\eta^2 = .03$, group $F(1, 85) = .07$, ns, $\eta^2 = .00$, time $F(1, 85) = .01$, ns, $\eta^2 = .00$.

12 Month Follow-up Risk Analyses

To further evaluate the effectiveness of the program, Chi-square analyses were again conducted

TABLE 1

Mean Scores on Child Self-report Measures at Pre-intervention, Post-intervention and 12-month Follow-up

	PRE		POST		12MTH F.U	
Measure	Intervention	Control	Intervention	Control	Intervention	Control
SCAS (Universal)						
M	28.09	31.45	18.33	28.23	16.66	27.54
SD	18.45	14.76	14.07	17.80	13.91	20.06
SCAS (High Anx)						
M	57.61	53.61	31.83	45.87	31.55	45.52
SD	14.51	7.42	14.98	22.24	15.11	26.72
RCMAS (Universal)						
M	10.87	13.79	7.35	9.52	7.56	10.25
SD	7.19	10.20	6.62	6.37	6.39	6.17
RCMAS (High Anx)						
M	19.14	19.63	13.10	13.06	11.95	13.33
SD	5.25	4.45	6.67	6.66	6.62	6.00
CDI (Universal)						
M	9.74	12.42	9.97	11.64	9.99	13.02
SD	8.59	8.18	9.39	9.61	8.51	10.02
CDI (High Anx)						
M	18.26	16.65	11.99	14.46	11.84	15.78
SD	8.44	5.71	7.16	9.29	7.26	8.72

Note: SCAS = Spence Children's Anxiety Scale; RCMAS = Revised Children's Manifest Anxiety Scale; CDI = Children's Depression Inventory

on the SCAS to examine the risk status of children from post- to 12-month follow-up. A significant relationship between risk status and treatment group was found $\chi^2(3) = 26.08$, $p < .05$ when looking at the results for all children from post-intervention to 12-month follow-up (see table 2). In particular a greater percentage than expected progressed to "at risk" at 12-month follow up in the control group and a greater percentage than expected remained at risk in the control group.

In terms of the CBCL (parent version), no significant effects for the internalising scale from post to 12-month follow-up were found: interaction $F(1, 281) = .005$, *ns*, $\eta^2 = .00$, condition, $F(1, 281) = .39$, *ns*, $\eta^2 = .00$ or phase, $F(1, 281) = .73$, *ns*, $\eta^2 = .003$., for the control group ($M = 55.22$, $SD = 13.35$) and the intervention group ($M = 53.92$, $SD = 11.41$). Similarly, no significant effects were found for the externalising scale from post- to 12-month follow up: interaction, $F(1, 390) = .34$, *ns*, $\eta^2 = .001$, condition, $F(1, 280) = .004$, *ns*, $\eta^2 = .00$ or phase, $F(1, 280) = 1.84$, *ns*, $\eta^2 = .00$. for the control group ($M = 46.77$, $SD = 14.61$) and the intervention group ($M = 46.10$, $SD = 10.31$).

To determine whether there were delayed effects in children's improvement over time (i.e., from pre-test to 12-month follow-up) a second 2 (condition: intervention vs. waitlist control) × 2 (pre-test vs. 12-month follow-up) repeated measures ANOVA was conducted. On the internalising scale no significant interaction, $F(1, 311) = 1.90$, ns, $\eta^2 = .006$, or condition effect, $F(1, 311) = .27$, *ns*, $\eta^2 = .001$, was found. However, a significant main effect for time was found, $F(1, 311) = 7.74$, $p < .05$, $\eta^2 = .02$, with both group scoring lower on the internalising scale across time. In terms of the externalising scale no significant effects were found; interaction, $F(1, 310) = 3.36$, *ns*, $\eta^2 = .01$, condition $F(1, 310) = .79$, *ns*, $\eta^2 = .003$ or phase, $F(1, 310) = 1.02$, *ns*, $\eta^2 = .003$. There were no significant differences found for children whose parents returned the CBCL for each of the three assessment phase on level of anxiety severity $\chi^2(1) = 1.86$, *ns;* however, significant differences between the rate of return of parent questionnaires existed between the intervention and control group, with higher percentages found in the intervention group $\chi^2(1) = 50.10$, $p < .001$.

Follow-up Diagnostic Interviews

Diagnostic interviews were conducted at 12-month follow-up, with all children scoring above the clinical cut off for anxiety (42.48 SCAS) and depression (above 17 CDI) at pre-intervention. This resulted in 62 children (45 from the intervention group and 17 from the control group). Six parents refused consent for their child to undergo diagnostic interviews (9.7%), (5 children from the intervention group, and 1 child from the control group). The remaining 56 children entered into the diagnostic interviews. Table 3 shows the primary Axis I and secondary diagnosis for the 56 children based on the child ADIS-C (Silverman & Albano, 1997). Notably, one third (33%) of children with a primary anxiety disorder also had a secondary anxiety problem. The children with a primary diagnosis of depression ($N = 2$) had a secondary anxiety problem. Moreover, of those

TABLE 2

Risk Status of all Children at Posttest and 12-month Follow-up

Group	Not at risk at Post or 12 F/U	Not at risk at Post but at risk at 12 F/U	At risk at Post but not at 12 F/U	At risk at Post and 12 F/U
Control ($N = 131$)	74.8%	7.6%**	5.3%	12.2%**
Intervention ($N = 339$)	91.4%	1.5%	3.2%	3.8%

Note: *$p = < .05$ **$p = < .01$

diagnosed with a *DSM-IV* disorder, 47% had a comorbid diagnosis.

Overall, 85% of children in the intervention group who were scoring above the clinical cut-off for anxiety and depression were diagnosis free in the intervention condition at 12-month follow-up compared to only 31.2% of children in the control group, χ^2 (1) = 15.6, $p < .01$.

Prediction of Maintenance Effects

The fourth aim of the study was to investigate whether age, gender, group, and measures taken at pre-treatment were predictive of maintance effects at post- and 12-month follow-up intervals. Logistic regression analyses were conducted at post-intervention and 12-month follow-up. The dependant variable was risk group (not at risk vs. at risk). Predictor variables were age of child, gender, intervention group status, pre-intervention scores on the RCMAS, SCAS, and CDI, and parent scores on the CBCL Internalising scale.

At post-intervention a significant equation was found χ^2 (7, N = 401) = 75.69, $p < .001$, indicating the predictor variables distinguished between "not at risk" and "at risk" groups. However, prediction success was mixed, with 98.6% of not at risk children and 30.6% of at risk children correctly classified, with an overall success rate of 92.5%. Significant individual predictors were age ($p < .01$), group ($p < .01$), and pre SCAS scores (P < .001). Significantly fewer children χ^2 (1) = 11.76, $p < .001$ in the intervention group (7%) were at risk compared to children in the control group (16.8%). Children aged 12 years were less likely to be at risk (3.9%), whilst children aged 10 years were most at risk (47.1%). Children with lower SCAS anxiety symptoms at pre-intervention were found to be at low risk at post-intervention.

For risk status at 12-month follow-up, a significant equation was found χ^2 (1, N = 341) = 108.11, $p < .001$, indicating the predictor variables distinguished between not at risk and at risk groups. However, prediction success was mixed, with 98.0% of not at risk children and 45.7% of at risk children correctly classified, with an overall success rate of 92.7%. Significant individual predictors group ($p < .01$), and pre SCAS scores ($p < .001$). Significantly

TABLE 3

Numbers and Percentages of Children with Primary DSM-IV Diagnoses at 12-month Follow-up in Intervention and Control Groups

Diagnosis	Control Group (N = 16)		Intervention Group (N = 40)	
	N	%	*N*	%
Primary Diagnosis				
Social Phobia	5	31.3	1	2.5
Specific Phobia	2	12.5	3	7.5
Generalised Anxiety Disorder	4	25.0	0	0
Major Depressive Disorder	0	0	1	2.5
Dysthymia	0	0	1	2.5
Total: Any anxiety problem	11	68.8	4	10
Total: Other diagnoses	0	0	2	5
Secondary Diagnosis				
Social Phobia	1	6.3	1	2.5
Specific Phobia	2	12.5	1	2.5
Generalised Anxiety Disorder	0	0	1	2.5
Major Depressive Disorder	0	0	0	0
Dysthymia	1	6.3	0	0
Total: Any anxiety problem	3	18.8	3	7.5
Total: Other diagnoses	1	6.3	0	0

less children χ^2 (1) = 18.27, $p < .001$ in the intervention group (6%) were at risk compared to children in the control group (18.3%). Children with lower SCAS anxiety at pre-intervention were found to be at low risk at 12 months after intervention.

FRIENDS Program Acceptability Measures

The FRIENDS program received positive evaluations from children, parents and teachers alike. Tables 4–7 present the acceptability of the FRIENDS program as rated by children, their parents, and teachers. Sixty-six per cent of children said they would sometime or often use the skills they learnt in the FRIENDS program. In regards to how much they learnt about coping with worries, 37% reported learning a lot and 48.8% reported learning some. No child reported learning nothing from participation in the FRIENDS program. In terms of how enjoyable they found the program, 84.8% of children rated the program as somewhat enjoyable or higher.

TABLE 4

Acceptability of the FRIENDS Program as Rated by Child Participants in Percentages

(*N* = 408)	A lot (%)	Some (%)	A Little (%)	Not at All (%)
How much did you enjoy the FRIENDS program?	31.1	53.7	14.2	1.0
How much did you learn by doing the program with your friends?	30.6	53.9	15.4	0
How much did you learn about feelings?	40.0	46.6	13.0	.5
How much did you learn about how to cope with feeling worried or nervous?	37.0	48.8	13.2	1.0
How often do you use the ideas taught in the FRIENDS program?	14.0	52.9	29.2	2.7

TABLE 5

Acceptability of the FRIENDS Program as Rated by Parents in Percentages

(*N* = 181)	A lot (%)	Some (%)	A Little (%)	Not at All (%)
How useful are positive skills programs in general?	44.8	50.8	4.4	1.0
How useful did you find FRIENDS for enhancing your child's coping skills?	27.1	43.6	28.7	0.6
How important is it for schools to implement programs such as FRIENDS into curriculum?	39.8	52.5	7.7	0
How much did you learn about enhancing your child's coping skills?*	20.8	63.5	15.2	0.6
How much do you think your child learnt about coping?	23.2	62.4	14.4	0
How much do you think your child enjoyed the FRIENDS program?	27.1	55.2	16.6	1.1
How often does your child use the skills taught?	13.8	25.2	41.7	19.3

Note: * Based on ratings of parents who attended the parent sessions.

TABLE 6

Acceptability of the FRIENDS Program as Rated by Teachers in Percentages

(*N* = 17)	A lot (%)	Some (%)	A Little (%)	Not at All (%)
How useful are positive skills programs in general?	72.2	27.8	0	0
How useful did you find FRIENDS for enhancing children's coping skills in your class?	55.6	44.4	0	0
How much did you learn about enhancing resilience in children?	66.7	33.3	0	0
How much do you think your students learn about coping?	72.2	27.8	0	0
How much do you think your students enjoyed the FRIENDS program?	55.6	44.4	0	0
How easy did you find the FRIENDS program to implement into your classroom?	88.9	11.1	0	0
How well did the FRIENDS program compliment existing curriculum?	77.8	22.2	0	0

TABLE 7

Percentage of Children and Parents who Rated each of the FRIENDS Activities as Useful

	Useful Skill as Rated by Children (*N* = 408) (%)	Useful Skill as Rated by Parents (*N* = 181) (%)
Relaxation Exercises	65.2	26.0
Helping Others to Feel Good	63.2	53.0
6 Block Problem Solving Plan	58.6	23.2
Thinking Helpful Thoughts	58.1	58.3
Changing Negative Thoughts	57.6	61.9
Step Plan	57.6	34.8
Recognising Feelings in Self	55.1	64.1
Deep Breathing	48.5	52.5
Recognising Feelings in Others	41.9	68.5

Seventy point seven per cent (*N* = 181), of parents rated the FRIENDS program as somewhat useful or very useful in terms of enhancing their childs coping skills. Parents' ratings of how useful each skill taught was to their child are displayed in Table 7 along with child ratings of usefulness. Parents rated all the skills taught in the FRIENDS program as useful but "recognising feelings in others" (endorsed by 68.5% of the sample) was rated as most useful. This was followed by "recognising feelings in self" (64.1%) and the cognitive skills of "changing negative thoughts into helpful thoughts" (61.9%) and thinking helpful thoughts (58.3%). This was slightly different to the ratings evidenced by children who rated "relaxation exercises" (endorsed by 65.2% of the sample) as most useful, followed by "helping others to feel good" (63.2%). Over half the sample rated problem solving skills (58.6%) and cognitive skills such as thinking helpful thoughts (58.1%) and changing negative thoughts (57.6%) as useful.

In regards to teacher ratings (*N* = 17), the FRIENDS program was rated as acceptable on all aspects measured. Specifically, 88.9% rated the program as very easy to implement, 77.7% rated the FRIENDS program as complementing the existing curriculum, and 72.2% reported

that children in their class had learnt "a lot" about how to cope with worries. Table 9 presents the teachers' ratings on each of these dimensions.

Discussion

The specific aims of this study were to examine the remediating effects of the intervention on children's anxiety and depression symptomatology at long-term follow-up, in comparison to a waitlist control group. This study also reported on parental reports (i.e., CBCL) of the intervention pre, post and 12-month follow-up.

Overall, the CBCL evidenced no significant changes from pre- to posttest likewise in the Dadds et al. (1997) study and Shortt et al. (2001), all of which were conducted using Australian samples. While one explanation may be that this measure is less sensitive to change, competing explanations cannot be ruled out. Overall, the rate of response from parents in the current study was low (intervention group = 62.7% at posttest dropping to 58.1% at 12-month follow-up, and control group = 20.3% at posttest and 19.8% at 12-month follow-up), thus perhaps only the most motivated and committed families responded. While extra measures were taken to encourage parents to return questionnaires (including raffles, and regular reminders in school newsletters), this raises questions about the representativeness of the responding sample. While this is a common problem encountered in large research trials, conclusions regarding the impact of change based on parental responses should be regarded as tentative.

Generally, the results provide support for the hypotheses that at 12-month follow-up, the intervention group would be associated with lower rates of anxiety and depression compared to the monitoring group whereby anxiety and depressive levels were predicted to remain stable. Findings indicated that intervention gains were largely maintained over a period of 12 months as measured by self-reports and diagnostic interviews. Indeed, children's self reports indicated that universally, the intervention group maintained lower scores on the SCAS at follow-up, as did the high anxiety group in terms of reductions in self-reported anxiety and depression. Moreover, evidence of a prevention effect was also demonstrated, with 91.4% of the intervention group not at risk (i.e., not scoring in the clinical range on the SCAS self report measure) at post or 12-month follow-up, compared to 74.8% of the control group. Notably, a greater percentage of children in the control group progressed to "at risk" or "remained at risk" compared to children in the intervention group.

The clinical significance of the effect was further demonstrated through diagnostic interviews. Overall, 85% of children in the intervention group who were scoring above the clinical cut-off for anxiety and depression were diagnosis free in the intervention condition at 12-month follow-up, compared to only 31.2% of children in the control group. Taken together these results suggest that the intervention was effective in producing clinically and statistically significant reductions in levels of anxiety from pre to long-term follow-up. The inclusion of diagnostic interviews is a notable strength of the current study given that many of the previous prevention trials have had a heavy reliance on self-report measures of symptoms rather than actual disorders (e.g., Jaycox et al., 1994, Harnett, 2001). These results were comparable to those results achieved in the Dadds et al. (1997) and Barrett and Turner (2001) studies when trained clinical research teams implemented the program with high-risk children and those children displaying mild symptoms of anxiety. Hence, this study appears to support the benefits of a school-based universal anxiety prevention program.

A further objective was to examine factors predictive of maintance effects at post-intervention and 12-month follow-up intervals. Children's age, gender, intervention group and pre-intervention anxiety and depression scores were used as predictors of risk group status. Results were concurrent with previous research (Dadds et al., 1999) showing that children who did not receive intervention, and those with high levels of anxiety at pretreatment where more likely to have ongoing anxiety problems. Given the relatively low percentage of children correctly classified as at risk on the predictor variables,

additional individual and environmental factors clearly contribute to the maintenance of high levels of anxiety. These findings suggest that participation in class based group intervention ia potentially most beneficial to children with mild to moderate levels of anxiety, whereas severely anxious children may require additional treatment and/or an individualised program designed to address their personal needs.

No differences were found between males and females in treatment outcomes. Previous studies show inconsistent findings (Dadds et al., 1999, Barrett et al., 1996); although whether sex is a risk factor for a later anxiety disorder remains unclear, future prevention research may help to clarify this disparity. Further, age was found to be a strong risk factor because children aged 10 years were most likely to be at risk of an anxiety disorder, while children aged 12 were least likely to have high levels of anxiety. In light of recent research (Barrett & Turner, 2001), late childhood appears to be a potentially critical time in the development of anxiety problems. Future research is needed to evaluate the age at which children are most likely to benefit from school-based prevention programs.

Before summarising the implications of this study it is important to consider a number of methodological shortcomings and discuss how future research may overcome these. First, due to time and resource constraints, diagnostic interviews were only conducted at 12-month follow-up. Thus, examination of *changes* in diagnostic status over time was not possible. Consequently, whether these children initially met the criteria for an anxiety or depressive disorders is unknown. Second, given the large sample size and the high costs associated with diagnostic interviews, interviews were only conducted with children who were at risk for both anxiety *and* depression. As such, children who at pre-test were scoring in the clinical range for self-reported anxiety only, or depression only, were not interviewed. Accordingly, the question of whether children with pure anxiety or depression still met diagnostic criteria remains unanswered. Third, children were the sole informants of diagnostic status and because there was some loss of participants entering the diagnostic interview process, some bias may have been introduced through selective loss of children with or without anxiety problems. Clearly, the present study would have benefited from both child and parent administrations of the ADIS at three different points in time. The absence of the parent ADIS-P interview in the present study limits comparability of the results with those from other studies (e.g., Barrett et al., 1996; Dadds et al., 1997; Silverman et al., 1999, Shortt et al., 2000). However, this brings to the forefront a very real limitation of large-scale prevention trials and without substantial funding, this is likely to be a very real limitation for future research.

A further limitation was that teachers did not have the time to complete lengthy forms for each student at pre-, post-, and 12-month follow-up. Rather than lose teacher participation, we omitted teacher reports. Because it is generally recommended that multiple sources be used to assess childhood adjustment levels, and given that teacher ratings have proven reliability and validity when identifying students at risk for psychological disorders (Dadds et al., 1997), short succinct measures that teachers can use are desperately needed.

With regard to parent sessions, attendance rates were very low. This is a common problem in research, especially when services are provided for free. Consequently, there was insufficient power to analyse differential intervention effects for parent session attendees and non-attendees. Reminder letters were sent to all families; therefore, we can only speculate as to why families did not attend all sessions It may be that parents viewed parent sessions as unnecessary since their child was attending the program. Alternatively, the timing of parent sessions may not have been optimal. While some schools made active attempts to provide parent sessions both during the day and at night, not all schools could do this. From general observations it appears that with the provision of more flexible times, more parents attended. While attendance rates may be improved by offering parent sessions at times convenient for the parents, the high commitment families have external to the school system is a real factor that cannot be ignored. Perhaps as an alternative, future research could provide parents with a

parent booklet of the key strategies, which is sent home, and enclose a phone number they can contact for further support and assistance.

Results from the acceptability of the intervention for the child participants provide support for the social acceptability (or consumer satisfaction) of the CBT-based FRIENDS program. Social acceptability is an important issue for researchers conducting clinically developed intervention programs within community settings. Although a positive outcome was reported, most participants in the current study rated the "acceptability" of the program in the mid-range; at this point we can only speculate why this is the case. Obtaining compliance with interventions can be a problem, although further research is required to determine factors that influence the acceptability of the FRIENDS program as a universal school-based intervention.

One noteworthy limitation is the data collected by teachers. As these were the teachers who implemented the program in their schools they could potentially manifest a positive bias to the acceptability of the program. A suggestion for future research is to administering social acceptability measures to teachers who are not directly involved in the program implementation. Further studies examining the acceptability of the FRIENDS program as a universal school-based prevention program are required in order to tailor the FRIENDS program to suit the school curriculum. The following factors should therefore be investigated: child's level of anxiety (normal to mild levels of anxiety in community samples vs. moderate to severe anxiety in clinical samples); setting (large school classroom vs. small clinic room); number of participants in the group (25–30 in the classroom vs. 8–12 in the clinic); group leader (school teacher vs. psychologist); peer pressure; parental participation; and children's motivation, attitudes and aptitude toward cognitive behavioural intervention.

The findings of the current study have wide ranging implications First, a major concern surrounding universal prevention models is that participants at risk may not receive sufficient exposure (duration or intensity) to alter the pathological developmental pathway (Greenberg et al., 1999). The findings of the present work support the utility of universal prevention. The findings not only suggest that children at risk for anxiety can demonstrate reduced symptoms and diagnoses through a universal model, but also that involvement in a universal prevention program appears to prevent children from developing an anxiety disorder over a 1-year period. Beyond this, these findings also extend to reductions in self-reported levels of depression for those children with comorbid symptoms. Thus, the cost-effectiveness of employing a single universal program that reduces levels of both anxiety and depression is notable.

Second, we found that teachers could successfully deliver a psychological intervention as it was designed to be implemented. This has far reaching implications for the delivery of mental health interventions — school-based programs have the potential to reach large numbers of children over a relative short periods as well as reach individuals in increasingly remote areas where access to adequate mental health facilities is limited. In addition, a school based prevention program would help to overcome many of the problems associated with clinical practice, such as lengthy waiting lists, and reaching those in need, specifically because *all* children in a grade are targeted. Thus, this method of prevention appears to be a more cost-effective alternative to reducing the overall incidence of anxiety disorders within the community.

The current work has identified the school setting as the ideal setting for the creation of effective programs. Previous research has suggested that teachers (along with parents) often have difficulty in detecting anxiety difficulties given that they are less visible than their externalising counterparts (Dadds et al., 1997). Thus, educational efforts to enhance detection and promote positive coping skills constitute proactive approaches to anxiety problems. Moreover, as research into protective factors has demonstrated, the role of teachers as protective buffers in the lives of children is significant (Freedman, 1993; Radke-Yarrow & Brown, 1993; Wallerstein & Blakeslee, 1989; Werner & Smith, 1992). Hence, training these role models to use positive coping skills serves to strengthen the positive impact teachers can make on at risk children. Further, schools are an ideal source of

well-adjusted peers who can serve as valuable role models as well as sources of friendship and support. Teaching children the skills in the schools may also encourage more practice and generalising of skills to everyday situations, thereby enhancing the long-term effects of the program.

In terms of developmental timing, our findings lend support to the "earlier is better" aphorism. This may perhaps also explain why there has been inconsistent findings in the prevention of internalising disorders to date where many of the programs have intervened during the period of adolescence with less effective results (Harnett, 2001, Clark, 1993; Clark et al., 1993; Clark et al., 1995) Our findings are consistent with a number of studies conducted during early to middle childhood which have found treatment or preventive benefits (e.g., Barrett, Dadds, & Rapee, 1996; Barrett, 1998; Cobham, Dadds & Spence, 1998; Dadds et al., 1997; Flannery-Schroeder & Kendall, 2000; Kendall, 1994; Kendall et al., 1997; King et al., 1998; Last et al., 1998; Shortt et al., 2001; Silverman et al., 1999) with this age group. Given that anxiety disorders have a relatively early age of onset (Kovacs, Gatsonis, Paulauskas, & Richards, 1989; Last et al., 1992; Giaconia et al., 1994), with a sizeable percentage of the adult population recalling the onset of anxiety disorders during childhood and adolescence (Bourden, Perrin, Hersen, & Kazdin, 1988; Keller et al., 1992; Pollock, Ottot, Sabatino, & Majcher, 1996), the current study supports the case for preventive efforts targeted early in life. Thus, it appears that future researchers are advised to focus on the period of childhood as the optimum time for prevention. However, at this time, what is not clear is whether prevention is most effective if applied to risk factors that operate in infancy, or in early to middle childhood, or whether a lifespan approach is required with multiple intervention points. These answers will not become clear until further longitudinal studies are conducted.

In summary, this study is the first to demonstrate in a controlled universal prevention trial the positive benefits of a CBT based program on the mental health of young people when implemented by existing school staff. By training teachers to reduce levels of anxiety and depression, this approach may reduce the demand and cost of such internalising problems school staff may effectively manage themselves. Moreover, the program established strong collaborative relationships with participant families and teachers and created an upsurge of support in the community. It is anticipated that these new community based interventions will feature strongly in future research efforts. The question of whether brief school based prevention programs are effective in the long term (i.e., 5–10 years) in reducing prevalence, or whether intermittent interventions are required remains to be demonstrated. Although preventive intervention research is still a relatively young field and challenging tasks lay ahead, the preliminary results of the current study are encouraging.

Endnotes

1 Indicated prevention programs target individuals who are identified as having minimal but detectable behavioural symptoms or biological markers related to mental disorders, but who do not yet meet diagnostic criteria.

2 Selective prevention programs target individuals whose risk (based on biological or social factors) of developing mental disorders are significantly higher than average.

3 Teacher reports were initially planned in order to examine intervention effects from multiple informants. However this had to be ruled out given the feedback from schools concerned about the large amounts of time teachers would need to complete assessments for every child in their classroom at three different points in time which would compromise their ability to participate in the research.

4 Intervention schools actually included the FRIENDS for children workbook on their booklists at the beginning of the school term for all parents to purchase alongside usual school curriculum books.

5 Based on ratings of parents who attended the parent sessions

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