

Community Trial of an Evidence-Based Anxiety Intervention for Children and Adolescents (the FRIENDS Program): A Pilot Study

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The aim of the current pilot study was to examine the effectiveness of the FRIENDS program (a cognitive-behavioural intervention for children and adolescents with anxiety) within a community-based clinic in Brisbane, Australia. A total of 18 children participated in the study and completed the FRIENDS program at Pathways Health and Research Centre, an innovative research-based psychology clinic for children, adolescents and families. All participants either met criteria for an anxiety disorder ($N = 11$) or were experiencing subclinical symptoms of anxiety ($N = 7$) before commencing the intervention. Before and following treatment, participants were assessed using a diagnostic interview and completed a number of self-report questionnaires. Results indicated that 73% of the participants who met criteria for an anxiety disorder before the intervention were diagnosis-free following treatment. Positive treatment effects were also found for questionnaire data, indicating that there were significant reductions on self-report levels of anxiety and depression following treatment. The outcome of this research suggests that the FRIENDS program is an effective treatment for children with anxiety, and results from this community trial replicate findings from controlled treatment trials.

Anxiety is one of the most common psychological problems experienced during the childhood years (Mattison, 1992), with one in six children in Australia experiencing clinical levels of anxiety at any given time (Boyd, Kostanski, Gullone, Ollendick, & Shek, 2000). While the majority of children experience episodes of anxiety as part of a normal development, some children will also develop more-persistent and intense feelings of anxiety that will interfere significantly with their ability to handle a wide variety of everyday activities, including friendships with peers, academic work and family relationships (Barrett, 1998; Kashani & Orshavel, 1990). Considering the prevalence of anxiety within the community, and in light of the negative consequences for children suffering from these conditions, there is a great need for research that focuses on the effective management of anxiety during the childhood years.

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It is estimated that up to 10% of children, and between 15% to 20% of adolescents, experience clinical levels of anxiety or depression (Angold & Rutter, 1992; Kashani & Orvaschel, 1990). In addition to being prevalent within the community, anxiety is also highly co-morbid, thus children with one anxiety disorder tend to have at least one other anxiety disorder. Results of an investigation with 73 children, all diagnosed with a primary anxiety disorder, showed that 80% of children met criteria for a co-morbid anxiety disorder (Last, Strauss, & Francis, 1987). It has also been found that there is a strong relationship between depression and anxiety in children and adolescents (Cole, Peeke, Martin, Truglio, & Seroczynski, 1998). Children with both anxiety and depression tend to be older than their anxious-only or depressed-only counterparts, and they also seem to be more symptomatic. The results of research suggest that children who experience anxiety during early life are at a much greater risk for the development of further anxiety and depressive disorders during adolescence and early adulthood (Pine, Cohen, Gurley, Brook, & Ma, 1998; Cole et al., 1998). The importance of developing and evaluating techniques for the treatment and prevention of anxiety during childhood is clearly highlighted by these results.

Over the past 10 years, researchers have demonstrated that anxiety disorders in childhood can be successfully treated with relatively brief psychosocial interventions. A number of studies undertaken across the past decade have indicated that cognitive-behavioural treatment (CBT) for children is effective in reducing anxiety (Kendall, 1994; Barrett, Dadds, & Rapee, 1996; Last, Hansen, & Franco, 1998). These CBT interventions typically contain a collection of techniques, including exposure (systematic desensitisation), modelling, operant conditioning, cognitive restructuring and problem-solving strategies (Barrett, 2000).

Kendall (1994) conducted the first randomised treatment study of anxiety disorders in children in a trial that involved 47 children aged between 9 to 13 years with either a separation anxiety disorder, overanxious disorder or an avoidant disorder. These children were randomly allocated to either a treatment program or a waitlist condition. The treatment used in this study was a CBT program called Coping Cat, the development of which was based on the assumption that anxiety manifests itself at physiological, behavioural and cognitive levels (Kendall et al., 1991). Results of this study showed that 64% of the children in the treatment group were diagnoses-free at posttreatment, whereas only 1 child in the waitlist condition was diagnoses-free at the completion of the project.

Barrett et al. (1996) later extended this work by evaluating a family-based CBT program for childhood anxiety. The CBT program utilised in this study was adapted from the American Coping Cat program and was subsequently named the Coping Koala program, and was for use with Australian samples. A total of 79 children aged 7 to 14 years who fulfilled diagnostic criteria for separation anxiety, overanxious disorder or social phobia were randomly assigned to one of the following three conditions: (a) CBT program, (b) CBT program plus family component, or (c) waitlist. Results indicated that 69.8% of the children in both of the treatment groups (CBT or CBT + family) no longer fulfilled criteria for an anxiety disorder, compared with only 26% of children in the waitlist condition.

At 12-month follow-up, 70.3% of the children in the CBT group and 95.6% of the children in the CBT plus family condition no longer fulfilled criteria for an anxiety disorder. The results of this study demonstrate the added long-term benefits of implementing a family management component (e.g., providing parental training, improving family problem-solving) in addition to CBT for children with anxiety. In

addition, a long-term follow-up study with 52 of these children was conducted 5 to 7 years later, with results indicating that 85.7% of the children who completed the CBT program did not meet criteria for an anxiety disorder (Barrett, Duffy, Dadds, & Rapee, 2001). These findings add further support to the utility of CBT for the effective and long-term management of childhood anxiety. While such results provide support for the use of individual CBT for childhood anxiety, the efficacy of using CBT in a group-based format has also been investigated recently in controlled clinical trials (Barrett, 1998; Shortt, Barrett, & Fox, 2001; Silverman, et al., 1999).

Barrett (1998) presented the first study that investigated the efficacy of CBT group treatment. A total of 60 children aged 7 to 14 years old and diagnosed with an anxiety disorder were randomly allocated to three treatment groups: (a) group CBT (GCBT), (b) GCBT plus family management (GCBT plus Family), and (c) waitlist. Results indicated that 85% of children who received GCBT and 65% of the children receiving GCBT plus Family were diagnosis-free following treatment, compared to 25% of the children on the waitlist. In similarly positive results, Silverman and colleagues (1999) utilised a group-based CBT intervention for children with anxiety disorders and compared outcome with a waitlist group. Results indicated that 64% of participants in the treatment condition were diagnosis-free following the program, compared with 13% of the children in the waitlist group (Silverman et al., 1999).

These positive treatment outcomes for group-based CBT led to the development of the FRIENDS program (Barrett, Lowry-Webster, & Turner, 2000a, 2000b) for children and adolescents with anxiety and depression. This program is a group-based CBT intervention that is skills-based, and it involves the active participation of parents and other family members. The results of numerous studies have provided support for the efficacy of the program in controlled settings (Shortt et al., 2001) and when used with people from non-English speaking backgrounds (Barrett, Moore, & Sonderegger, 2000). In addition, the social validity of the FRIENDS program has also been reported, with the results of research indicating that participants in FRIENDS groups typically experience a high level of satisfaction with the program (Barrett, Shortt, Fox, & Wescombe, 2001). Finally, FRIENDS has been proven effective as a prevention program for school-aged children with symptoms of anxiety and depression. Results of universal school-based prevention trials have revealed that children in the FRIENDS intervention group reported fewer anxiety symptoms, regardless of their level of risk status, than the comparison group post-intervention (Barrett, Lock, & Farrell, 2005; Lowry-Webster, Barrett, & Dadds, 2001).

In summary, the collective results of controlled research trials indicate that the large majority of children who complete a family-based CBT intervention for anxiety (e.g., the FRIENDS program) will experience significant reductions in symptoms following completion of the program (Barrett, 1998; Shortt et al., 2001; Silverman et al., 1999). However, the studies conducted to date have all been controlled clinical trials performed in a university setting and under tight constraints. The major criticism of such randomised controlled designs is that the data are often not representative of what really occurs in the community. In a community setting there are many more factors influencing the outcome of the effectiveness of an intervention program, whereas controlled research typically is not representative of what occurs in the real world.

For example, controlled clinical trials utilise strict inclusion and exclusion criteria that are specifically designed to minimise the influence of external factors on

treatment effectiveness. Thus, clients using medication may be excluded from a study, or only clients with a parent willing to be involved in treatment may be included. The treatments are also applied by psychologists trained specifically in the implementation of the program, and rigid integrity checks are often performed. Finally, diagnostic and treatment outcome data are typically accompanied by reliability information to ensure the accuracy of assessments. Comparatively speaking, community clients self-refer, do not have to meet any particular criteria to acquire treatment, receive interventions implemented by a wide range of therapists with no checks made to study adherence to the program, and complete pre- and post-assessments without reliability checks. No research has thus far investigated what the effect of CBT treatment will be when it is delivered within a community setting.

The FRIENDS program has been empirically tested and found to offer relief for children suffering from anxiety. Obviously, the dissemination of such a program into the general community would provide great benefits to scores of children, families and mental health professionals dealing with childhood anxiety. Before this can occur, however, the program must first be evaluated in community settings to provide evidence that it is as successful in the real world. The aim of the present study was to do just that by examining the effectiveness of the FRIENDS program in a community setting using both clinician-rated diagnostic information and child and parent reports of symptom severity. It was hypothesised that participants completing the FRIENDS program would report significantly fewer anxiety symptoms at post-treatment compared to pretreatment. Furthermore, it was expected that a significant number of the participants completing the FRIENDS program would no longer fulfil criteria for their primary anxiety disorder at posttreatment.

Method

Participants

A total of 18 children and their parents participated in this study (11 females, 7 males). The children's ages ranged from 5 to 12 years ($M = 7.5$ years, $SD = 1.76$). A total of 11 children met criteria for a clinical diagnosis, with the remaining 7 children reporting some symptoms of anxiety but failing to meet diagnostic criteria. The symptom characteristics as well as the primary diagnoses and co-morbid diagnoses experienced by these children are presented in Table 1. Of the total sample, 14 children received the FRIENDS program in a group-based format and the remaining 4 children undertook the FRIENDS program on an individual basis.

Measures

Self-Report Measures

The Children's Depression Inventory. The Children's Depression Inventory (CDI; Kovacs, 1981) measures affective, cognitive and behavioural symptoms of depression in children aged from 8 to 17. The questionnaire consists of 27 items. For each item the child is asked to choose from three different statements the one that best describes their feelings during the past 2 weeks (e.g., 'I'm sad once in a while', 'I am sad many times' and 'I am sad all the time'). The cut-off score for moderate depressive symptoms is 13, and the cut-off score for severe depressive symptoms is 19. This measure has been found to have high internal consistency and moderate reliability (Saylor, Finch, Spirito, & Bennett, 1984).

Behaviour Change

TABLE 1

Symptom Characteristics and Co-morbidity

Diagnosis	Subclinical symptoms		Clinical diagnoses	
	N	%	N	%
Primary diagnosis:				
Generalised anxiety	—	—	4	22.22
Separation anxiety	2	11.11	2	11.11
Specific phobia	1	5.56	3	16.67
Social phobia	4	22.22	1	5.56
Dysthymia	—	—	1	5.56
Co-morbid diagnosis:				
Any diagnosis	—	—	5	27.78
Separation anxiety	—	—	3	16.67
Social phobia	—	—	1	5.56
Attention-deficit/ hyperactivity disorder	—	—	1	5.56

The Strengths and Difficulties Questionnaire. The Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) is a 25-item questionnaire that measures psychopathology in addition to positive behaviours of children aged 3 to 10 and youth aged 11 to 16. The questionnaire includes five subscales that measure particular domains of behaviour, including emotional symptoms, conduct problems, hyperactivity, peer problems and prosocial behaviour. The total score is obtained by summing the scores of all the scales, with the exception of the prosocial behaviour scale. The measure includes numerous parallel forms that include the same questions for children, youth and parents to complete. Findings of research on the psychometric properties of the SDQ confirm the satisfactory reliability and validity of this questionnaire (Goodman, 2001).

The Spence Children's Anxiety Scale. The Spence Children's Anxiety Scale (SCAS; Spence, 1997) is a self-report measure designed to assess anxiety symptoms in children aged 8 to 12 years. It consists of 44 items, 38 of which assess specific clusters of anxiety symptoms, including panic and agoraphobia, separation anxiety, physical injury fears, social phobia, obsessive-compulsive and generalised anxiety disorder. The remaining six items are positive 'filler items' and are included with the aim to reduce negative response bias. Children are asked to indicate the frequency with which they experienced each symptom on a 4-point scale ranging from *never* (0) to *always* (3). The total SCAS score is generated by summing all of the subscale scores. The clinical cut-off for this scale is 42.48. This scale has high internal consistency and adequate test-retest reliability (Spence, 1998).

Diagnostic Assessment

The Anxiety Disorder Interview Schedule for Children — Parent Version. The Anxiety Disorder Interview Schedule for Children — Parent Version (ADIS-P; Silverman & Nelles, 1988) is a structured clinical interview schedule designed specifically to diagnose anxiety disorders during childhood, and to differentiate them from

other internalising and externalising disorders (Silverman & Eisen, 1992). The ADIS-P diagnostic criteria is based on the information set out in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV; American Psychiatric Association, 1994). There are two versions of the Anxiety Disorder Interview Schedule for Children (ADIS), one that can be used to question the child (ADIS-C) and a parallel version that can be used to question the parents (ADIS-P). It has been demonstrated that the ADIS has the best psychometric properties for the diagnostic assessment of childhood anxiety disorders of all available measures (Piacentini & Bergman, 2000), and it has been shown that it is sensitive to treatment effects in child anxiety research (Barrett et al., 1996; Kendall, 1994).

Treatment Materials

The FRIENDS program is an empirically validated CBT program for children and adolescents who experience anxiety and depression. It is currently in its fourth edition of publication (Barrett, 2004a, 2004b, 2005a, 2005b). FRIENDS stems from the Australian Coping Koala (Barrett et al., 1996) program that was adapted from Kendall's (1994) original *Coping Cat Workbook*. The FRIENDS program has been demonstrated to be effective both in Australia and overseas through randomised controlled studies across a range of age groups and ethnic and social backgrounds (Barrett et al., 2000; Barrett, Sonderegger, & Sonderegger, 2001). Results of these randomised trials show that the FRIENDS program can be an effective treatment for children with anxiety disorders (Barrett, 1998; Shortt et al., 2001; Silverman et al., 1999). The program includes two developmentally sensitive workbooks, one for use with children and one for use with adolescents, and can be run in both group and individual settings. FRIENDS includes a family-skills component that involves parents in each stage of skill acquisition and provides parent training in anxiety management. The program consists of 10 weekly sessions and two booster sessions that are conducted 1 and 3 months following the completion of the program. The program additionally utilises the acronym FRIENDS to help children remember the different strategies they can use to effectively manage their anxiety (Figure 1).

The program covers a number of important topics, including (a) psychoeducation regarding feelings, (b) understanding the physical manifestation of anxiety and how

FRIENDS stands for: Feelings.

Remember to relax. Have quiet time.

Innner helpful thoughts ('I can do it! I can try my best!')

Explore solutions and Coping Step Plans.

Now reward yourself! You've done your best!

Don't forget to practise.

Smile! Stay calm for life!

FIGURE 1

The FRIENDS acronym.

to use relaxation skills, (c) cognitive restructuring and positive self-talk, (d) problem-solving skills and graded exposure for achieving goals or overcoming challenges, (e) the importance of self-rewards for trying hard and achieving goals, and (f) relapse prevention and learning how to maintain skills for life. The two booster sessions are designed to facilitate a generalisation of skills and help children to apply the skills to everyday challenging situations.

Procedure

The children involved in this study all received the FRIENDS program at Pathways Health and Research Centre. Pathways is a private psychology clinic located in Brisbane, Australia, and its services cover regional areas in south-east Queensland, including the Gold Coast and Sunshine Coast. This community-based centre offers empirically validated interventions for children, adolescents and families.

Before commencing the FRIENDS program, all children and their parents completed an initial assessment with a highly trained Pathways clinician. Children experiencing clinical or subclinical levels of anxiety were then either referred to a FRIENDS group-based intervention, or it was recommended that they complete an individual FRIENDS program if a group was unavailable. Before commencing the intervention, parents of all children involved completed a diagnostic interview (ADIS-P) with a clinically trained masters student. Based on this information, and following discussions with the treating clinician, the severity of the child's anxiety was rated on the ADIS. Those who received a severity rating below 4 were considered to have subclinical levels of anxiety, whereas children with a severity rating above 4 were considered to have a clinical diagnosis. Finally, before treatment began, all children completed the CDI, SASC and SDQ and all parents completed the parent form of the SDQ.

The FRIENDS program ran for 10 weekly, 90-minute sessions. Children who missed a group session received an individual meeting to catch up before the next group session. The FRIENDS treatment groups consisted of between 5 to 10 children. At the end of every session, parents were offered an outline of the contents of the session and homework activities. A parent session was also conducted with all parents in which they were taught positive reinforcement strategies, cognitive techniques to challenge unhelpful thoughts and problem-solving skills.

At the completion of the final FRIENDS session, children and parents were given the self-report questionnaires (CDI, SASC and SDQ) and were asked to complete and return them within 2 weeks. In addition, all of the parents completed a diagnostic interview to assess the degree of change from pre- to posttreatment (ADIS-P). Whenever a child met criteria for a clinical diagnosis, the severity of the disorder was rated using the scale mentioned previously.

Clinically trained masters students conducted all diagnostic interviews at pre- and posttreatment. Before making a diagnosis or rating the degree of severity, all cases were discussed with the treating clinician. In all of the cases, the students and therapist agreed on all of the primary diagnoses.

Results

Change in diagnostic status was evaluated only for children with a clinical anxiety diagnosis ($N = 11$). All other analyses were based on data derived from all participants ($N = 18$).

TABLE 2

Means and Standard Deviations for Self-Report Measures at Pre- and Posttreatment

Measure	Pre	Post
CDI		
<i>M</i>	10.06	5.31
<i>SD</i>	9.54	6.24
SDQ		
<i>M</i>	13.47	12.40
<i>SD</i>	5.19	4.12
SCAS		
<i>M</i>	29.73	21.13
<i>SD</i>	17.07	13.22

Note: CDI = Children's Depression Inventory, SDQ = Strengths and Difficulties Questionnaire,

Diagnostic Status

After completing the program, 73% of the participants who met criteria for a clinical anxiety disorder before the treatment were diagnosis-free. This means that 8 of the 11 children moved from the clinical to nonclinical range. The remaining 3 children still met diagnostic criteria for their primary anxiety disorder at posttreatment. These children were diagnosed with generalised anxiety disorder ($N = 2$) and specific phobia ($N = 1$).

With regard to co-morbidity, 5 of the 11 children were diagnosed with a co-morbid disorder before commencing the program. After completing the program, 1 of these children still met diagnostic criteria for the co-morbid disorder. This child was diagnosed with attention-deficit/hyperactivity disorder (ADHD).

After completing the program, an ADIS-P interview was also administered to the parents of children who had subclinical symptoms at pretreatment. Some of these children continued to have some subclinical symptoms ($N = 4$). None of the children moved from the subclinical into the clinical range during the treatment.

Self-Report Assessment

A paired samples t test was conducted to determine whether group means for each of the questionnaires had changed significantly from pre- to posttreatment. A small amount of self-report data is missing due to some participants being too young to complete the forms and some questionnaires not being returned within the 2-week period following treatment. Thus, outcomes on the CDI are based on data deriving from 16 participants, while outcomes on the SDQ and SASC are based on 15 participants. The means and standard deviations of the questionnaire scores at pre- and posttreatment are presented in Table 2. The change in means from pre- to posttreatment are also displayed graphically in Figure 2.

The CDI questionnaire was used to measure affective, cognitive and behavioural symptoms of depression. The results show a significant reduction in depression ratings from pretreatment to posttreatment, $t(15) = 3.73$, $p < .005$. Results of the analysis of the SDQ questionnaire scores revealed a change in the total scores over time, with the mean score at posttreatment being lower than the mean score at pretreatment, although this difference was not significant, $t(14) = 0.964$, $p > .5$. Anxiety

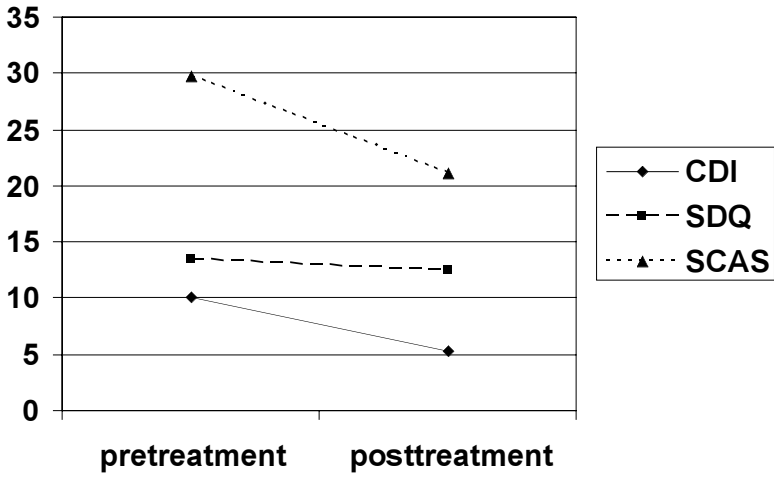


FIGURE 2
Mean scores for the Children’s Depression Inventory, Strengths and Difficulties Questionnaire and Spence Children’s Anxiety Scale at pre- and posttreatment.

symptoms as measured by the SCAS questionnaire decreased significantly from pre- to posttreatment, $t(14) = 2.597, p < .05$.

Discussion

The aim of the current study was to examine the effectiveness of an empirically validated family-based CBT program (the FRIENDS program) in a community setting. Based on diagnostic information, results indicated that the majority of children (73%) who had a diagnosable anxiety disorder before treatment improved following completion of the FRIENDS program. Similar results have been reported in previous controlled clinical trials, with one of these trials reporting improvement rates of 69% after completing the FRIENDS program compared to 6% for those in the waitlist condition (Shortt et al., 2001). Another study showed recovery rates of 64% of participants completing the CBT treatment being diagnosis-free compared with 13% of the children in the waitlist condition (Silverman et al., 1999).

Positive treatment effects were also found on the self-report measures. Significant changes from pre- to posttreatment were shown for the CDI and SASC. The lower scores for the CDI questionnaire at posttreatment indicate that children were experiencing less depressive symptoms after completing the program. In addition, the change in the SCAS scores indicates that anxiety symptoms also reduced significantly after finishing the treatment. These results imply that the intervention reduces subjectively experienced anxiety and depressive symptoms in subclinically and clinically anxious children. The decrease of both anxiety and depressive symptoms is interesting, and may relate to the proposed relationship between the two conditions. Further research is required to examine the connection between anxiety and depression within clinical samples.

Although the posttreatment results for the SDQ were lower than those collected before treatment, this difference was not significant. This indicates that no significant

effect from pre- to post-intervention was found on the scales measured by the SDQ. However, the scales that comprise the SDQ (i.e., emotional symptoms, conduct problems, hyperactivity and peer problems) do not directly tap into the constructs of anxiety or depression; therefore, the measure may not be a good indication of the type of change that did occur in children who completed the program.

This study was performed in a community-based clinic and therefore the data are representative of what genuinely appears in the community. The children who participated in this research were not selected based on any inclusion or exclusion criteria; rather, they participated following self-referral for treatment. Thus, positive treatment outcomes were not due to strict experimental designs, but rather to the components of the treatment itself. In addition, five independent clinicians based at the clinic delivered the intervention, as opposed to controlled research where treatment is strictly manualised and monitored. When many different therapists administer the program, it is more probable that the improvements of the participants are the result of the treatment only and that this progress is not dependent on the process of an individual therapist who provides the treatment. This is one of the first studies to examine the effectiveness of an empirically validated program for self-referred clients within a community-based setting. The results of the study are in line with treatment gains reported in controlled clinical research, suggesting that the FRIENDS program is useful and effective when applied in the real world.

Limitations

A drawback of this study is that it was based on a small sample and therefore the statistical power was limited. Future studies would do well to recruit a greater number of participants, for example, by collecting participants across different clinics. By using a larger sample, the statistical power will be enlarged and thereby any evidence of the effectiveness of the program is strengthened. In addition, due to the absence of a control group in the current study, the outcome for the treatment condition cannot be set against the outcome for a waitlist condition. Therefore, it cannot be excluded that gains made by the treatment group may be explained by variables other than the effects of treatment. Despite this, however, previous controlled research evaluating the FRIENDS program has shown high improvement rates among children in the intervention group in comparison to children in a control group (Barrett, 1998; Shortt et al., 2001; Silverman et al., 1999). The outcomes of these studies make it more likely that one can correctly assume that the improvement rates in this study are the result of the intervention.

Another weakness of this research is the reliability of the diagnostic data. The ADIS-P interviews were administered by three clinically trained students, who after completing the interview discussed all diagnoses and severity ratings with the therapist of each child. In all cases, the student who administered the ADIS-P interview and the therapist agreed on the primary diagnosis. However, due to lack of blind or independent assessments, and due to the absence of review of the interview, the reliability of the diagnosis may be impaired. In a related point, both the prediagnostic assessments and the postdiagnostic assessments were administered to the parents of the participants. Consequently, the diagnoses of the children are based on their parent's subjective interpretation of their child's behaviour and may therefore be biased. Recommendation for future research is to use multiple sources to obtain

information, such as the child, parent and the teacher, to reliably diagnose childhood anxiety disorders.

This research did not include enough participants to examine differences between individual and group-based treatment. Some children involved in this research received individual treatment ($N = 5$), whereas the majority of children ($N = 14$) received the program in group format. Although previous research has demonstrated that there are no considerable differences in treatment gains between these two types of treatment, it may have influenced the outcome of this research.

As a final point, the post-assessments were conducted immediately after completion of the 10 sessions of the FRIENDS program. This study does not include follow-up data and so the long-term effects of the program cannot be examined. While the results of previous research have indicated that treatment gains tend to be maintained in the long term (Barrett, Duffy et al., 2001), it will be important to investigate whether treatment gains are retained over a long period of time when the treatment is conducted in a community setting.

Clinical Implications

This study showed that participation in the FRIENDS treatment program, when used in a typical community setting where no inclusion and exclusion criteria are applied and where treatment is conducted by a variety of therapists, led to large improvements in children with anxiety problems. To ensure that the program is accessible for all children, it is of great importance to disseminate the program into the wider community. This can be achieved by providing accredited training in conducting the FRIENDS program to clinicians and teachers; translating the program into different languages; and providing schools, psychologists, clinics, governments and, most importantly, the public with information about the program.

Furthermore, it is essential to make sure that the program is sustainable within the community. This can be attained by ongoing evaluation of the effectiveness of the program. Besides further validating the efficacy of the program, ongoing evaluations can also contribute to its improvement. For further development of the program, it is recommended that future research examine factors that influence the treatment effect across different settings.

Future research on the evaluation of the program within community settings would benefit by including larger sample sizes and implementing a waitlist condition. Through this, the statistical power of the research can be enlarged. Also, when using a larger group sample, differences in treatment delivery (group and individual treatment) can be studied. Another recommendation for further research is to evaluate the effectiveness of the program when conducted across multiple settings and clinics. Research based on data collected from different sites can demonstrate or exclude the influence of the specific clinic conditions on the outcome. For example, a clinic can, due to the position or level of the fees, attract clients from a lower socioeconomic standing. This can influence the outcome in either a positive or negative manner.

Furthermore, it is of great importance to investigate which aspects of the program are contributing to therapeutic progress in order to develop the most efficacious treatment for children with an anxiety problem. Also, further research examining what parts of the treatment are most effective for different types of clients will serve to improve the long-term prognosis of anxious children.

Summary

Overall, this study adds to a growing body of evidence that suggests CBT interventions (e.g., the FRIENDS program) are effective treatments for children with anxiety symptoms, and provides some of the first empirical support that such interventions are equally effective when applied in a noncontrolled, community-based setting. Continued research on a larger scale is required to further explore and evaluate such programs within the community.

References

- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Angold, A., & Rutter, M. (1992). Effects of age and pubertal status on depression in a large clinical sample. *Development and Psychopathology*, 4(1), 5–28.
- Barrett, P.M. (1998). Evaluation of cognitive-behavioural group treatment for childhood anxiety disorders. *Journal of Clinical Child Psychology*, 27(4), 459–468.
- Barrett, P.M. (2000). Treatment of childhood anxiety: Developmental aspects. *Clinical Psychology Review*, 20, 479–494.
- Barrett, P. (2004a). *FRIENDS for life: Group leaders' manual for children*. Brisbane, Australia: Australian Academic Press.
- Barrett, P. (2004b). *FRIENDS for life: Workbook for children*. Brisbane, Australia: Australian Academic Press.
- Barrett, P. (2005a). *FRIENDS for life: Group leaders manual for youth*. Brisbane, Australia: Australian Academic Press.
- Barrett, P. (2005b). *FRIENDS for life: Workbook for youth*. Brisbane, Australia: Australian Academic Press.
- Barrett, P.M., Dadds, M.R., & Rapee, R.M. (1996). Family treatment of childhood anxiety: A controlled trial. *Journal of Consulting and Clinical Psychology*, 64, 333–342.
- Barrett, P.M., Duffy, A.L., Dadds, M.R., & Rapee, R.M. (2001). Cognitive-behavioural treatment of anxiety disorders in children: Long-term (6 year) follow-up. *Journal of Consulting and Clinical Psychology*, 69, 135–141.
- Barrett, P.M., Lock, S., & Farrell, L. (2005). Developmental differences in universal preventive intervention for child anxiety. *Clinical Child Psychology and Psychiatry*, 10(4), 539–555.
- Barrett, P.M., Lowry-Webster, H.M., & Turner, C.M. (2000a). *Friends for children group leader manual*. Brisbane, Australia: Australian Academic Press.
- Barrett, P.M., Lowry-Webster, H.M., & Turner, C.M. (2000b). *Friends for youth group leader manual*. Brisbane, Australia: Australian Academic Press.
- Barrett, P.M., Moore, A.F., & Sonderegger, R. (2000). The FRIENDS program for young former-Yugoslavian refugees in Australia: A pilot study. *Behaviour Change*, 17, 124–133.
- Barrett, P.M., Shortt, A.L., Fox, T.L., & Wescombe, K. (2001). Examining the social validity of the FRIENDS treatment program for anxious children. *Behaviour Change*, 18, 63–77.
- Barrett, P.M., Sonderegger, R., & Sonderegger, N.L. (2001). Evaluation of an anxiety-prevention and positive-coping program (FRIENDS) for children and adolescents of non-English-speaking background. *Behaviour Change*, 18, 78–91.
- Boyd, C.P., Kostanski, M., Gullone, E., Ollendick, T.H., & Shek, D.T.L. (2000). Prevalence of anxiety and depression in Australian adolescents. *Journal of Genetic Psychology*, 161, 479–492.
- Cole, D.A., Peeke, L.G., Martin, J.M., Truglio, R., & Seroczynski, A.D. (1998). A longitudinal look at the relation between depression and anxiety in children and adolescents. *Journal of Consulting and Clinical Psychology*, 66, 451–460.
- Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A research note. *Journal of Child Psychology and Psychiatry*, 38, 581–586.

- Goodman, R. (2001). Psychometric properties of the Strengths and Difficulties Questionnaire. *Journal of the American Academy of Child and Adolescent Psychiatry*, 40, 1337–1345.
- Kashani, J.H., & Orvaschel, H. (1990). A community study of anxiety in children and adolescents. *American Journal of Psychiatry*, 147, 313–318.
- Kendall, P.C. (1994). Treating anxiety disorders in children: Results of a randomized clinical trial. *Journal of Consulting and Clinical Psychology*, 62, 100–110.
- Kendall, P.C., Chansky, T.E., Friedman, M., Kim, R., Kortlander, E., Sessa, F.M., et al. (1991). Treating anxiety disorders in children and adolescents. In P.C. Kendall (Ed.), *Child and adolescent therapy: Cognitive-behavioral procedures* (pp. 131–164). New York: Guilford Press.
- Kovacs, M. (1981). Rating scales to assess depression in school-aged children. *Acta Paedopsychiatria*, 46, 305–315.
- Last, C.G., Hansen, C., & Franco, N. (1998). Cognitive behavioural treatment of social phobia. *Journal of the American Academy of Child and Adolescent Psychiatry*, 37, 404–411.
- Last, C.O., Strauss, C.C., & Francis G. (1987). Comorbidity among childhood anxiety disorders. *Journal of Nervous and Mental Disease*, 175, 726–730.
- Lowry-Webster, H.M., Barrett, P.M., & Dadds, M.R. (2001). A universal prevention trial of anxiety and depressive symptomatology in childhood: Preliminary data from an Australian study. *Behaviour Change*, 18, 36–50.
- Mattison, R.E. (1992). Anxiety disorders. In S.R. Hooper, G.W. Hynd, & R.E. Mattison (Eds.), *Child psychopathology: Diagnostic criteria and clinical assessment* (pp. 179–202). Hillsdale, NJ: Erlbaum.
- Piacentini, J., & Bergman, R. (2000). Obsessive-compulsive disorder in children. *Psychiatry Clinics of North America*, 23, 519–533.
- Pine, D.S., Cohen, P., Gurley, D., Brook, J., & Ma, Y. (1998). The risk for early-adulthood anxiety and depressive disorders in adolescents with anxiety and depressive disorders. *Archives of General Psychiatry*, 55, 56–64.
- Saylor, C.F., Finch, A.J., Spirito, A., & Bennett, B. (1984). The Children's Depression Inventory: A systematic evaluation of psychometric properties. *Journal of Consulting and Clinical Psychology*, 52, 955–967.
- Shortt, A.L., Barrett, P.M., & Fox, T.L. (2001). Evaluating the FRIENDS program: A cognitive-behavioral group treatment for anxious children and their parents. *Journal of Clinical Child Psychology*, 30, 525–535.
- Silverman, W., & Eisen, A. (1992). Age differences in the reliability of parent and child reports of child anxious symptomatology using a structured interview. *Journal of American Academy of Child and Adolescent Psychiatry*, 31, 117–124.
- Silverman, W.K., Kurtines, W.M., Ginsburg, G.S., Weems, C.G., Lumpkin, P.W., & Carmichael, D.H. (1999). Treating anxiety disorders in children with group cognitive behavioural therapy; A randomised clinical trial. *Journal of Consulting and Clinical Psychology*, 25, 225–237.
- Silverman, W.K., & Nelles, W.B. (1988). The anxiety disorders interview schedule for children. *Journal of the American Academy of Child and Adolescent Psychiatry*, 27, 772–778.
- Spence, S.H. (1997). Structure of anxiety symptoms in children: A confirmatory factor-analytic study. *Journal of Abnormal Psychology*, 106, 280–297.
- Spence, S.H. (1998). A measure of anxiety symptoms among children. *Behaviour Research and Therapy*, 36, 545–566.