Project Title:
Effectiveness versus efficacy of a community based group treatment program for childhood anxiety

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Executive Summary

Program Evaluated

The current evaluation examined the effectiveness of an adapted group treatment program for childhood anxiety offered at Aisling Discoveries Child and Family Centre, The “Coping Cat” Cognitive-Behavioral Program for Anxious Children (Kendall, 1990), as delivered in a community clinic. Children (7-12 years old) received a group cognitive–behavioural intervention that is designed to create an awareness of anxious cognitions and provide coping strategies. The intervention emphasizes four steps for dealing with anxiety; recognition, clarification, coping, and evaluation. The treatment manual, which details the goals and procedures for each group session was followed closely. However, as has been emphasized by the author (Kendall & Chu, 2000), the manual allows for flexibility on the part of the therapist to tailor the therapy to the children’s intellectual and emotional functioning. Given the levels of co-morbidity, and other special needs of the diverse clients attending community clinics, much adaptation is used by the experienced therapists who provide the intervention. For example, all groups include a parental component in the form of group workshops. It is perhaps because of these types of adaptations that some previous studies have shown that the efficacy of treatment such as CBT is often not maintained when evidence-based interventions are offered in the community (Weisz et al., 1995).

Questions we endeavoured to answer with this evaluation:

1. Does childhood anxiety decrease for participants who complete a group CBT program?
2. Are the effects of the intervention as large as those found in similar laboratory research studies?
3. Is social functioning, as reported by the child and caregiver, impacted by the group treatment for childhood anxiety?
4. Does school functioning, as reported by the teacher, show an improvement after a group treatment for childhood anxiety?

Methodology

Both questionnaire and interview data were collected. Parents, children, and teachers (given parental consent) were asked to complete all questionnaires prior to the group. Both parents and teachers completed behaviour checklists, which included scales probing anxiety, social skills, and classroom functioning. Children completed questionnaires concerning their anxiety and social relationships. All participants were asked to complete the same questionnaires at the end of the group. At this time, both children and their parents were individually interviewed. Participants were asked to share their experiences with the program, their thoughts on its effectiveness, and provide example of how the group has impacted the child. The questionnaire data was scored and analyzed to determine if differences exists in the pre-and post-group scores. Interviews were transcribed and examined for common themes.

Results

Thus far, data has been analyzed for 21 participants. As expected, overall, both children and parents reported a decrease in child anxiety after treatment. Teachers, however, did not report any change in their students’ functioning. Social and classroom functioning, both areas in which children with anxiety often show deficits, did not show changes after treatment according to standardized measures. Interview
data however, revealed that the treatment did have some impact on these areas. The clinically significant effects of the treatment was compared to that of large university research-based treatments and, as expected, were found not to be as strong.

Discussion

The results suggest that the treatment, when run in a community clinic and modified to fit the needs of the clientele, remains effective at reducing childhood anxiety. Despite the significant decrease in child anxiety, our results did not meet the same clinically significant levels as those of similar laboratory-based treatment studies. This should not be taken to mean that the treatment is not effective, as there are many significant differences between community and laboratory settings. For example, the families seeking treatment in the evaluation presented with many co-morbid issues, such as multiple diagnoses, low income, single parent families etc. In a community clinic, these factors are not controlled for, as that is not common practice in typical community mental health centres; however, laboratory-based research is highly controlled and children presenting with issues of comorbidity can be excluded from the sample. Finally, the findings regarding the generalizability of the treatment to social and classroom functioning were mixed. Although the questionnaire data revealed no change, during the interviews both parents and children reported changes in these areas. This finding may suggest that the questionnaires used were not sensitive enough to pick on the subtle changes experience by children in these domains of their lives. They may also suggest that the group be modified to include more instruction on using the coping skills taught in both social and classroom situations, in order to better help children learn to generalize the skills to these areas.

Reduction in anxiety cannot be seen as the only means of measuring treatment effectiveness and, as the current evaluation found mixed results as to whether the treatment generalized to social and classroom functioning, changes to this program that may be considered, in order to enhance effectiveness. Suggestions to improve the treatment might include more structured discussions about situations that cause anxiety when relating to peers or when in the classroom and how to cope with them. These are areas which may be difficult for children to discuss in the presence of their peers and therefore the initiation of these topics may have to be done by group leaders. Also, based on the themes arising from the interview data with caregivers, future groups should include more caregiver involvement. Many caregivers felt they would have liked to have been more informed and involved in the treatment process. Increased involvement from parents may lead to more encouragement for the children in multiple settings.

Future research must continue to examine treatment as it is naturally run in the community, both to determine what factors impeded effectiveness and also to examine how the treatment generalizes to other areas of children’s functioning. Ontario community mental health centers are often the first place parents turn to for support, it is therefore imperative that these centers offer the most effective treatment possible. In the future it will be important to collaborate with other community mental health centres offering similar treatment in order to attain larger sample sizes, which will allow for more powerful conclusions.
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Abstract

There has recently been a call for more ecologically valid explorations of effectiveness for treatments that have demonstrated efficacy in research trials. This evaluation examined the outcome of Cognitive Behavioural Treatment (CBT) for childhood anxiety, provided in a group format by community child therapists to 21 participants (ages 6 to 12) and their caregivers. Effectiveness should not be seen as a reduction in anxiety only; thus, this evaluation also looked at how well the gains made in treatment generalize to other areas of children’s functioning. Questionnaire data was collected from parents, children and teachers both pre- and post-treatment, and interviews were conducted with all participants upon completion. Children and parents reported a significant decrease in child anxiety after treatment though outcomes were less favourable than those reported by research clinics. Finding regarding the generalizability of the treatment to social and classroom functioning were mixed; questionnaire data revealed no change, during interview both parents and children reported changes in these areas. Case studies are provided that illustrate that quantitative and qualitative outcome data can be incongruent, and together speak to the complexity of measuring change in symptomatology. Suggestions for future research and treatment implications are discussed.
Introduction

Over the past decade, there has been an increasingly urgent call to investigate the degree to which treatments, once found to be efficacious through randomized clinical trials, are effective in community clinical settings (Southam-Gerow, Weisz, & Kendall, 2003; Weisz, Donenberg, Han & Weiss, 1995). Although most clinical interventions take place in community clinics, the majority of studies that have established efficacy for specific interventions have been conducted in university-affiliated research-oriented clinics, under controlled and standardized conditions not often possible in community settings (Weisz et al., 1995).

Much has been written about the need to bring evidence-based practice (EBP) to community mental health clinics and other primary care settings. While these settings strive to provide effective and beneficial programs to their clients, many frequently-used methods are outdated (Ollendick & King, 2004; Persons, 1997). EBP models often reach community clinics circuitously and slowly, which also means that knowledge can sometimes be distorted or lost in translation (Barwick et al., 2005; Feldman, 1999; Persons, 1997). As Southam-Gerow and Kendall (2006) noted, even when EBP is adopted, the treatments offered through the community are often not as successful as those offered in research clinics. Weisz et al. (1995) suggest that the participants in clinical trials frequently do not reflect the clinical populations in settings where the interventions are implemented. Laboratory-based treatment is usually conducted by senior graduate students with a deeper theoretical understanding of the treatment as compared to therapists in a community setting (Southam-Gerow & Kendall, 2006). Researcher therapists have smaller case loads than community therapists, allowing them to focus more on each case (Weisz et al. 1995). In an era of cutbacks in mental health funding, there may also be pressures on community therapists to provide intervention in groups rather than individually. Last, although not fully studied, clients served in the community may present with more complex issues than participants in research clinics. These discrepancies may convey the sense to clinicians that aspects of EBP are irrelevant to real world contexts (Garland, Plemmons, & Koontz, 2006). As a result, EBP models may frequently be modified by practitioners, a step that can reduce their empirical validity (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005).

These concerns about less than adequate knowledge translation have long been salient in the area of adult treatment. Recently however, the call to shift to proven and efficacious interventions has taken on a particular urgency with regard to child treatment. Settings that cater to children and families are increasingly being called upon to evaluate the efficacy of their programs (Ollendick & King, 2004; Nelson, Steele, Mize, 2006). In the past decade some progress has been made in this respect, as many regulating bodies are becoming more explicit in their requirements of publicly funded treatment centers (see for example Children’s Mental Health Ontario’s 2008 Consultation Paper on Evidence-Based Practices). Still, while there generally appears to be consensus among child clinicians that more attention should be paid to whether or not the interventions that are delivered actually effect change, the implementation of EBP continues to be far from optimal in most community child treatment settings. More importantly, even when EBP has been adopted, evaluations are seldom conducted (Weisz, Chu, & Polo, 2004), resulting in an information black-out regarding actual outcomes. This has prompted some authors to urge that, in order to overcome the cited obstacles to implementation, a substantial portion of the adaptation and testing for interventions should be focused “on precisely the kinds of individuals, interveners, and contexts for which the interventions are ultimately intended” (e.g. Weisz, Sandler, Durlak & Anton, 2005, p.644).
It is clear that more research is needed about the effectiveness of EBTs in ecologically relevant environments, as it is in these settings, and not research clinics, that most children and families are first assessed and treated. The present evaluation of Cognitive Behavioral treatment (CBT) for childhood anxiety, as adapted for, and implemented in a community clinic, is an attempt to address this concern.

Cognitive-Behavioural treatment for childhood anxiety

Anxiety disorders are among the most common childhood disorders (Fergusson, Horwood, & Lynsky, 1993), with prevalence rates ranging from 8 to 12 percent (Beidel, 1991; Costello, Mustillo, Erkanli, Keeler, & Angold, 2003) for children aged 7 to 16 years. Anxiety can be debilitating on its own; however, it is often associated with co-morbid problems. Research has shown that children with anxiety often suffer from social deficits (Chansky & Kendall, 1997) and poor academic functioning (Ialongo, Edelsohn, Wertheramer-Larsson, Crockett & Kellam, 1995). Anxiety has also been found to be co-morbid with depression (Kendall, Kortlander, Chansky, & Brady, 1992; Last, Hersen, Kazdin, Finkelstein, & Strauss, 1987), attention deficit hyperactivity disorder and conduct problems (Brady & Kendall, 1992). Children suffering from anxiety often become adolescents with anxiety (Kendall, Safford, Flannery-Schroeder, & Webb, 2004) and eventually adults who continue to suffer from the disorder (Last, 1988). The broad impact and lasting effects of anxiety highlight the need to begin treatment early, in the hopes of providing children with the coping skills necessary to deal with anxiety-provoking situations as they arise during childhood, adolescence, and adulthood.

One of the most empirically supported methods for the treatment of anxiety is CBT (Friedberg et al., 2003). It is aimed at changing anxious thoughts, feelings, and behaviour (Kendall, 1993). Using concepts such as identifying the problem as well as choosing and evaluating solutions, Kendall (1990) proposed a CBT protocol, the Coping Cat program, for individual use with anxious children. The program is designed to help children cognitively restructure their anxious thoughts and behaviours into more positive ones. It is provided over 16 weeks; the first 8 sessions are used to teach the children the skills necessary to change their thoughts, and the next 8 weeks to practice the skills. The program, which is now widely used in a variety of settings, is designed to be developmentally appropriate, flexible, and clinically sensitive. A manual ensures consistent application of this CBT model by therapists (Albano & Kendall, 2002). Randomized clinical trials (Kendall, 1994; Kendall et al., 1997) with the individual version of Coping Cat have shown significant decreases in child anxiety, as reported by participants and their parents, when compared with controls, and gains were maintained at a one-year follow-up. A later study revealed that positive outcomes were further kept up after 2 and 5 years respectively (Kendall and Southam-Gerow, 1996).

Considering that group treatments are more practical and economical, Barrett (1998) examined the effectiveness of the program when provided in a group format, and found it to also be a successful method of reducing anxiety. In a hospital based study, Manassis, et al. (2002) were the first to complete a randomized clinical trial to examine differences between individual and group versions of an adaptation of Coping Cat. The results showed that the outcomes for the two treatment groups did not differ for children suffering from generalized anxiety disorder, phobic disorder or hyperactivity; however, those with social phobia made greater gains in individual therapy. It seems that overall, group and individual CBT have similar success at lessening the symptoms of anxiety in children, excluding, perhaps, a small subset of clients.
Children suffering from anxiety disorders have been found to have deficits in social functioning (Chansky & Kendall, 1997). The link between social deficits and anxiety has been established for several decades. As far back as 1956, McCandless, Castaneda, and Palermo used sociometric ratings to compare the peer status of anxious children in grades 4, 5, and 6. Findings revealed a negative relationship between anxiety and social status; children who suffered from anxiety were rated as less popular by their peers. Since the original study, several others have supported the link between anxiety disorders and poor social functioning. Panella and Henggeler (1986) found that anxious-withdrawn adolescents displayed less social competence, less positive affect and more personal apprehension than their well adjusted peers during observed interactions with a friend and with a stranger. Strauss, Frame and Forehand (1987) compared anxious children, as rated by teachers, with non-anxious children and found anxious children to be significantly less popular, more shy and withdrawn, and more likely to be teased and disliked by peers.

Strauss, Lease, Kazdin, Dulcan and Last (1989) designed a study to compare the social competence of paediatric outpatients and typical controls. They measured loneliness and perceived competence in a group of anxious paediatric outpatients, non-anxious outpatients suffering from other childhood disorders, such as conduct disorder, and a group of non-referred children serving as a control group. Results showed that anxious children demonstrated deficits in social functioning relative to the non-referred children and displayed shy and withdrawn behaviours significantly more than the other clinically referred externalizing children. All informants, caregivers, teachers, and the children themselves, characterized the anxious children as socially maladjusted (Strauss et al., 1989).

As reductions in symptoms of anxiety cannot be seen as the only means of measuring change, researchers have suggested examining changes to children’s quality of life (Gladis, Gosch, Dishuk, & Crits-Christoph, 1999). With the link between anxiety and impaired social functioning clearly established, it is important to examine how treatment that is aimed at reducing anxiety, impacts social functioning. Conclusions in this area are very limited and have been mixed. In a lab-based study designed to investigate the differences between anxious children treated with individual versus group CBT, Flannery-Schroeder and Kendall (2000) compared children’s social functioning, as measured through reported loneliness and friendship quality, before and after treatment. They found no difference between the two treatment types and no significant increase in social functioning after treatment. The authors hypothesize that this was due to either the fact that this type of treatment does not impact social functioning, or that the participants did not have serious social concerns. More recently however, Wood (2006), in a lab-based study, specifically examined the effects of individual CBT for anxiety on social functioning in a sample of 6- to 13-year-olds. He found that based on parent and self-reports, social functioning showed an increase when anxiety decreased. Wood concluded that reducing anxiety has a positive carry over effect into the area of social functioning.

Clearly, previous studies have produced limited and contradictory findings regarding the generalizability of treatment gains to social functioning. As children with anxiety have been shown to suffer in social domains (Strauss et al., 1989), it is essential that efforts be made to have the coping skills taught in treatment carry over into children’s peer interactions. This issue should be examined in more detail to determine what effects, if any, treatments for anxiety have on social functioning, and to determine what can be done to increase the generalizability of acquired coping skills to this domain of children’s functioning.
Anxiety Disorders and School Functioning

School functioning is another area found to be affected by anxiety, although relatively little has been written in this domain when compared with social functioning. It is thought that anxiety results in a decrease in concentration on classroom activities due to high arousal (Ma, 1999). Strauss et al. (1987) found children rated as anxious by their teachers had overall lower academic performance than their non-anxious peers. Langley, Bergman, McCraken, and Placentina (2004) also reported a negative relationship between anxiety and school performance levels in a cross-sectional study. Furthermore, Ialongo et al. (1995) designed a longitudinal study in which they followed children from grade 1 to grade 5. Using self-report measures of anxiety, interviews with classroom teachers, and progress reports, they found anxiety in grade 1 was predictive of anxiety in grade 5, as well as, poor academic performance. Thus, when left untreated, children suffering from anxiety did significantly less well academically than their peers. These researchers did not find a link between poor academic functioning in grade 1 and anxiety in grade 5, suggesting that, in this study, anxiety lead to lower academic functioning and not the reverse. These researchers suggest that intervention should be aimed at dealing with the impact of anxiety on academic performance. However, it is first essential to determine whether treatment for anxiety has any impact on school functioning. Wood (2006), as mentioned above, also looked specifically at the effects of reducing anxiety, using individual CBT, on classroom functioning and found that, when anxiety decreased, school functioning, as reported by caregivers and children, increased.

Given the evidence that classroom functioning is affected by anxiety (Langley et al., 2004), and the fact that the effectiveness of treatment should be measured through more than simply a reduction in anxiety (Gladis et al., 1999), it is important to re-examine the effects of treatment for anxiety on functioning at school. Although Wood (2006) did find that treatment gains generalized to the classroom, the study did not use teacher reports, arguably the most informative source on children’s classroom functioning. Therefore, the present evaluation will re-address the issue using classroom teachers’ reports.

Present Evaluation

The present evaluation examined the effectiveness of group CBT, designed to decrease anxiety, when the intervention was conducted in a community clinic. Changes to children’s experience of anxiety and their home, social and classroom functioning were examined. It is known that children with anxiety often show deficits in those domains (Chansky & Kendall, 1997; Langley et al., 2004). It is thus paramount to examine how treatment aimed at reducing anxiety affects these areas of the child’s life. Wood (2006) was the first to specifically examine similar questions, using a comparable treatment program, and provide preliminary findings. His results are promising; however, the study did not include teachers as informants, it included mainly two-parent, middle class families and it was conducted in a university lab setting (J. Wood, personal communication, June 6, 2006). Therefore, it is important to re-examine the issue and include teachers as informants using a low socio-economic status (SES) sample. Also, a central part of the purpose of the evaluation is to examine these questions in a community-based setting.

Project Questions

This study evaluated the following questions with both quantitative and qualitative inquiry:

1. Question 1. Does childhood anxiety decrease for participants who complete a group CBT program?
We expected that anxiety would decrease after treatment. Previous research has demonstrated that CBT is an effective means of reducing childhood anxiety (Dadds et al., 1997; Kendall, 1994; Kendall, et al., 1997). It has also been shown that effectiveness is maintained when the treatment is run in a group setting, rather than individually (Barrett, 1998; Manassis, et al., 2002). In this study, childhood anxiety was assessed by comparing child-, caregiver-, and teacher-reported child anxiety before and after treatment using the Revised Child Manifest Anxiety Scale (RCMAS), the Child Behavior Checklist (CBCL), and the Child Behavior Checklist – Teacher Report Form (TRF) as several previous studies have done (Kendall, 1994; Kendall, et al., 1997; Wood, 2006). It was expected that anxiety as reported by the all informants would decrease after treatment.

**Question 2.** Are the effects of the intervention as large as those found in similar laboratory research studies? We expected that the effects of the intervention would not be as large as similar laboratory research studies. Treatments offered through the community are often not as successful as those offered in laboratory settings (Southam-Gerow & Kendall, 2006). To allow for comparisons with the numbers from larger laboratory studies who have used the same technique to assess clinical effectiveness (Kendall, 1994; Kendall et al., 1997), effectiveness was measured by assessing the number of children who went from clinical to non-clinical levels on the CBCL anxiety, and anxiety-depression scales.

**Question 3.** Is social functioning, as reported by the child and caregiver, impacted by the group treatment for childhood anxiety? We expected that social functioning would improve after treatment. Previous research has highlighted the link between maladaptive social functioning and childhood anxiety (Chansky & Kendall, 1997). Mixed findings have been reported on the effects of a reduction in anxiety on the increase in social functioning. Flannery-Schroeder and Kendall (2000) found no change after treatment, whereas Wood (2006) found an improvement after a CBT intervention. In this evaluation social functioning was assessed through two measures. Friendship quality has been found to have a higher correlation with loneliness and internalizing problems than measures of popularity (Nangle, Erdley, Newman, Mason, & Carpenter, 2003). Therefore, friendship quality, as reported by the child using the Friendship Quality Questionnaire (FQQ), was compared before and after treatment. Asher, Hymel, and Renshaw (1984) highlighted the importance of obtaining information about children’s perceived loneliness, suggesting that even if a child does not have many friends, if she does not perceive herself as lonely; it may not be an area of concern. Therefore, loneliness, as reported by the child using the Loneliness and Social Dissatisfaction Questionnaire (LSDQ), was compared before and after treatment.

**Question 4.** Does school functioning, as reported by the teacher, show an improvement after a group treatment for childhood anxiety? We expected that school functioning would show an improvement after treatment. Research has shown that children with anxiety often suffer academically (Langley et al., 2004). Preliminary research on the effects of reducing anxiety on academic performance suggests that a reduction does indeed lead to improvements in performance (Wood, 2006). Research in the past has mainly focussed on academic achievement as a means to assess school functioning (Ialongo et al., 1995; Strauss et al., 1987). Children spend the majority of their day in school, therefore academic achievement is not seen as the only measure of classroom functioning and this evaluation will define classroom functioning through teacher ratings of academics, working hard, learning ability, and happiness in the classroom as measured on the TRF.

**Methods**

**Participants**
Participants were 21 children, referred for treatment from multiple community sources such as advertisements and within agency referrals. Clients ranged in age from 6 to 12 years old (M = 9.29, SD = 1.92). Of the 21 participants approximately half (n = 11, 52.4%) were boys. The number of children in each group ranged from five to seven. Four groups were run over the course of a year and a half, and all groups were approximately 16 weeks in length. As is the tradition in this community clinic, children with different forms of anxiety were not differentiated. Children who obtained high scores in anxiety on a standardized Intake measure, The Brief Child and Family Phone Interview (BCFPI) (Cunningham, Pettingill, & Boyle, 2001), regardless of the type of anxiety reported, were included in the groups.

It was expected that more data would be available at the time of this report; however, the next round of groups began later than anticipated. This is often the case when conducting research in a community setting, where researchers have little control over practical issues such as this. The post-group data is currently being collected for 15 more participants and the results will be available soon.

Setting and Clinical Staff

All treatment groups were conducted by professional child and family therapists at Aisling Discoveries Child and Family Centre, a children’s mental health centre in Scarborough, Ontario, a community that is characterized by exceptionally high levels of cultural diversity, poverty and violence, including domestic violence. Up to 54% of the population was born outside of Canada, 48% of residents report speaking a non-official language at home, and almost 20% of the population is under 15 years of age, with an overall poverty rate of 20%.

Over the course of the research program, five female therapists were involved as group leaders, with two to three leaders per group (including one student). Lead therapists were trained as Child and Youth workers, and thus differed from typical research clinic therapists in terms of number of years, and type of education. All therapists were highly experienced, with ten or more years of professional practice. All had participated in a workshop on the Coping Cat program provided by P. Kendall, and had reviewed the Coping Cat manual prior to offering the program. Therapists also provided each other with peer supervision. Group leaders were assisted by graduate students in Clinical-Developmental Psychology.

The “Coping Cat” Cognitive-Behavioral Program for Anxious Children

Children received group cognitive–behavioural therapy meant to create recognition of anxious cognitions and provide coping strategies for dealing with them. The intervention emphasizes four steps for dealing with anxiety; recognition, clarification, coping, and evaluation. The first half of the treatment sessions was aimed at teaching children the concepts and the second half was focused on practicing the skills learned. Each week children were encouraged to practice the skills in their everyday lives and asked to report back, in the following group session, on how they applied them.

The treatment manual developed by Kendall (1990) which details the goals and procedures for each group session was followed closely. However, as has been emphasized by Kendall & Chu (2000), the manual allows for flexibility on the part of the therapist to tailor the therapy to the children’s intellectual and emotional levels, and this kind of adaptation certainly happened over the course of the group programs. A workbook was provided for each child participating in The Coping Cat (Kendall, 1990). This was used to help present the goals of the therapy to the children. Children were assigned homework to complete in their workbooks. All groups included a caregiver component in the form of workshops. The nature of the caregiver component varied between groups, and this aspect is being studied as part of a
larger concurrent project. In both conditions, the major principles of the treatment program were shared with parents and tips for managing children’s anxiety were discussed.

Procedure

Parents of referred clients were contacted prior to the starting date of the group to inform them of the research initiative, with an invitation to participate. It was made clear that participation was optional and that the services offered or received would in no way be compromised should clients chose not to participate. Measures taken to protect confidentiality were explained to all participants. All group program clients chose to be involved in the research, and gave informed consent /assent.

Caregivers and children were asked to complete pre-treatment questionnaires before the first group session. At this time, consent to approach the children’s classroom teacher was obtained and the teacher questionnaires were mailed. See Appendix A for the consent forms. Teachers were sent letters explaining one of their students and his or her caregiver were participating in a research study being conducted by York University. No information about the nature of the study, or the fact that this was an intervention, was shared with the teacher. The groups were run, as usual in this treatment centre, over the course of 4 months, with breaks during school holidays. At the completion of the group program, caregivers and children again completed all measures. At this time children and caregivers were interviewed individually. The interview with each participant was recorded and transcribed verbatim. Throughout the process, to thank them for their continuing participation, caregivers were periodically entered into a draw for small gift items.

Outcome Measures

As recommended by Kendall and Morris (1991) several methods and sources were used in the collection of the information to ensure that the data set was as informative as possible. A combination of questionnaire and interview measures was used with children and caregivers.

Children’s Self-Report Anxiety. The Revised Children’s Manifest Anxiety Scales (RCMAS) is a 37-item self-report measure for children in grades 1 to 12, used to measure the symptoms of childhood anxiety (Reynolds & Richmond, 1997). The measure provides an overall score for anxiety, as well as scores on several subscales, including physiological symptoms, worry/oversensitivity symptoms, and concentration. It also provides a lie scale measuring social desirability. Children were presented with items and asked to decide whether each statement applied to them or not. The RCMAS has demonstrated adequate internal consistency and has a reliability estimate of .85. Content, construct, and discriminate validity have been confirmed (Reynolds, Bradley, & Steele, 1980), and normative data are available (Reynolds & Paget, 1981). Clinically significant scores on the RCMAS have been defined as scores at or above 19 points (out of a possible 28) (Stallard, Velleman, Langsford and Baldwin, 2001).

Children’s Self-Reported Social Functioning. The Loneliness and Social Dissatisfaction Questionnaire (LSDQ) (Asher & Wheeler, 1985) is a 24-item self-report measure that was used to assess children’s dissatisfaction with their peer relationships. Sixteen items question loneliness and social dissatisfaction whereas 8 are filler questions that asked about hobbies and interests. The questionnaire assessed children’s feelings of loneliness, children’s feelings on their current peer relationships, children’s perceptions on how relationship provisions are being met and children’s perceptions of their social competence. Children were asked to rate each question on a 5-point scale ranging from always true to not true at all. The scale has internal consistency (Cronbach’s alpha = .90) and is internally reliable (split half correlations = .91) (Asher et al., 1984). For children ages 6 and 7, a modified version of the
questionnaire was used, for these children each question was read aloud. All items address the same questions; however, instead of appearing as “I like to read”, as it does for older children, the item appeared as “You like to read.” For the modified version children were asked to rate each item either yes, sometimes, or no (Cassidy & Asher, 1992).

The Friendship Quality Questionnaire – Short Form (FQQ/SF) (Parker & Asher, 1993) is a 21-item self-report measure used to assess children’s perceptions of the quality of their best friendship. Children are asked to think of their very best friend and asked to rate qualities of that specific friendship on a 5-point scale ranging from not at all true to really true. The measure provides scores on six subscales: validation and caring, conflict resolution, conflict and betrayal, help and guidance, companionship and recreation, and intimate exchange. This measure has satisfactory internal consistency (Cronbach alphas for each subscale range from .73 to .90). It is suitable for use with children ages 6 and 7 as long as it is explained clearly to each participant (J. G. Parker, personal communication, May 16, 2006).

**Parent Report of Child Anxiety.** The Child Behavior Checklist (CBCL) (Achenbach & Rescorla, 2001) is a 118-item measure which assesses children’s behaviour problems and social competencies. The measure provides scores in two areas, adaptive functioning and problem scales. The adaptive functioning subscale scores includes activities, social and school, and the problem scales include anxiety, depression, somatic complaints, social problems, thought problems, attention problems, rule-breaking behaviour, aggressive problems, and other behaviour problems as reported by the parent. Caregivers were asked to rate each item on a scale from not true (0) to somewhat or sometimes true (1) to very true or often true (2). This measure has high retest reliability (.95), and validity has been demonstrated as all items significantly (p = .01) discriminate between similar referred and non-referred children. Normative data are available.

**Parent and Child Structured Interviews.** Upon completion of the therapy sessions individual interviews were conducted with each child and parent who participated. Both caregivers and children were queried about their experience in the group and about when the children use the skills taught. Only researchers who had not also been co-leaders engaged in interviewing participants and collecting questionnaire data in order to minimize the social desirability effect. Interview questions were derived based on the main questions of this research project in consultation with the clinical psychologist overseeing the project. See Appendix B for a list of interview questions.

**Teacher Report Children’s Social and School Functioning.** The CBCL – Teacher Report Form (TRF) (Achenbach & Rescorla, 2001) mirrors the CBCL completed by caregivers. It is designed to measure classroom functioning and is completed by the child’s primary teacher. The measure provides scores in two areas; adaptive functioning and problem scales. Subscales include academic performance, working hard, behaving, learning, happy, anxiety, depression, somatic complaints, social problems, thought problems, attention problems, rule-breaking behaviour, and aggressive behaviour. Teachers are asked to rate each item on a scale from not true (0) to somewhat or sometimes true (1) to very true or often true (2). This measure has high retest reliability and moderate inter-teacher agreement. Again validity has been demonstrated as all items significantly (p = .01) discriminate between similar referred and non-referred children. Normative data are available. It is important to note that parent-teacher agreement is generally lower that inter-teacher agreement (r = .23) (Achenbach & Rescorla, 2001).

To allow for comparisons with larger investigations conducted in research clinics (Kendall, 1994; Kendall et al., 1997), effectiveness was also measured by assessing the number of children who had shifted from clinical (pre-treatment) to non-clinical (post-treatment) levels of anxiety on the CBCL anxiety, and anxiety-depression, scales.
Results

Analysis of Quantitative Data

To ensure the normality of the data, variables with $n = 21$ were checked for skew and kurtosis. Skew and kurtosis fell between -1 and 1, an acceptable range when dealing with a small sample size. Table 1 presents the means and standard deviations for all variables of interest pre- and post-treatment.

Question 1. It was expected that childhood anxiety would decrease according to all sources of informants. This was partially supported, as children and caregivers reported a significant decrease; however, classroom teachers reported no significant change. Due to the small sample size, treatment effects were analyzed using paired sample t-tests. Child reported anxiety, as measured using the RCMAS, showed significant improvement after treatment $t(20) = 2.37, p = .028$. The effect size was moderate (Cohen, 1988), Cohen’s $d = .55$ and power was moderate at .617. Caregiver reports of child anxiety, using the anxiety problem scale on the CBCL, also showed significant improvement after treatment, $t(19) = 2.9, p = .009$. The effect size was relatively small (Cohen, 1988), Cohen’s $d = .33$ and power was high at .787. Teacher reports of child anxiety, as measured by the anxiety problem scale on the TRF, did not show significant changes after treatment, $t(12) = .71, p = .489$, power was low at .101. As an exploratory measure, and because the sample which included teacher reports was quite small, t-tests on each item of the TRF pertaining to anxiety were performed to examine whether teachers may have consistently endorsed change on any particular item. The only item out of six on which teachers reported a significant change from pre- to post- treatment was ‘nervous, high-strung, or tense’, $t(12) = 2.52, p = .027$. Teacher reports were only available for a subset of the sample. An independent samples t-test was done to determine whether there were any difference in treatment gains between children whose caregivers granted permission for researchers to contact the teacher and those who didn’t. Caregiver reports of child anxiety were compared for the two groups and no significant differences were found, $t(18) = .975, p = .342$.

To determine whether caregivers, children, and teachers reported similar changes for each participant, the relationship between the change in anxiety according to all three informants was examined. The change in anxiety from pre- to post-treatment was calculated by subtracting the pre-treatment scores from the post treatment scores for all three sources; children, caregivers, and teachers. Next correlation analyses between the change score for all three informants were performed to determine if different respondents were rating the same children as having changed after treatment. There were no significant correlations between any informants.

Age and gender were examined using independent samples t-tests to determine possible differences for both caregiver and child reported anxiety. There was no difference in treatment outcome, as reported by children, for younger versus older participants $t(19) = -.39 p = .70$, or as reported by the caregiver, $t(18) = -.84, p = .41$. Gender had no significant effect on treatment outcome as reported by children, $t(19) = .28, p = .78$ and caregivers, $t(18) = 1.8 p = .09$. Attendance was also examined to determine whether absences had an impact on outcome. Children who had missed two or more sessions were separated from those who had missed one or none and both the child and caregiver reports of child
anxiety were compared for the two groups. No significant differences were found for attendance on child reported anxiety \( t(20) = 1.65, p = .22 \), or caregiver reported child anxiety \( t(19) = 1.61, p = .22 \).

Table 1

*Means and Standard Deviations for the Outcome Measures*

<table>
<thead>
<tr>
<th>Measures</th>
<th>Pre- Intervention</th>
<th>Post-Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean SD</td>
<td>Mean SD</td>
</tr>
<tr>
<td>Child Report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCMAS</td>
<td>12.9 6.3</td>
<td>9.3 6.7</td>
</tr>
<tr>
<td>Loneliness (LSDQ)</td>
<td>34.8 15.3</td>
<td>32.8 13.8</td>
</tr>
<tr>
<td>Friendship Quality (FQQ)</td>
<td>66.3 13.7</td>
<td>71.5 15.7</td>
</tr>
<tr>
<td>Caregiver Report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBCL Anxiety Problems</td>
<td>5.5 2.4</td>
<td>3.7 2.6</td>
</tr>
<tr>
<td>CBCL Internalizing</td>
<td>15.5 8.2</td>
<td>14.8 15.5</td>
</tr>
<tr>
<td>CBCL Social Problems</td>
<td>5.3 3.7</td>
<td>4.5 3.4</td>
</tr>
<tr>
<td>Teacher Report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRF Anxiety Problems</td>
<td>2.7 2.8</td>
<td>2.2 2.8</td>
</tr>
<tr>
<td>TRF Internalizing</td>
<td>10.3 10.0</td>
<td>10.5 12.5</td>
</tr>
<tr>
<td>TRF Sum of 1,2,3,4</td>
<td>15.5 4.7</td>
<td>16.1 5.3</td>
</tr>
<tr>
<td>TRF Social Problems</td>
<td>3.5 5.6</td>
<td>4.0 5.7</td>
</tr>
<tr>
<td>TRF Attention Problems</td>
<td>17.5 14.8</td>
<td>16.3 15.5</td>
</tr>
</tbody>
</table>

\( n = 21 \) for all child reports, \( n = 20 \) for all parent reports, \( n = 13 \) for all teacher reports
Question 2. It was expected that the effects of this intervention would not be as large as those in similar laboratory-based studies. This was also supported, as a much lower percentage of children exhibited clinically significant changes in this evaluation. To allow for comparisons with larger scale university studies, the clinical significance of the treatment was examined, first for caregiver reports, then for teacher and child reports. As has been done in previous research, the number of children whose caregiver assessed them as falling in the clinical range on subscales of the CBCL who were returned to the average range after treatment was calculated. See Table 2. Of those children who fell into the clinical range pre-treatment on the anxious-depressed subscale, 33% now fell in the borderline range and none was returned to normal ranges after treatment. Of those children who fell into the clinical range pre-treatment on the anxiety problem scale, 45% were returned to normal limits after treatment and 18% now scored in the borderline range.

The reports from teachers were examined in the same manner, see Table 2. Only 15% of children fell into the clinical range on the anxious-depressed subscale of the TRF, all of whom remained in the clinical range after treatment. Again, only 18% of children fell into the clinical range on the anxiety problem subscale of the TRF, 8% of these children were returned to the average range after treatment.

Although there are no data available for comparison, the same clinically significant changes to child reported anxiety were also calculated. Only 4 out of 21 children scored in the clinically significant range before treatment. After treatment, 2 children scored in the clinically significant range, thus 50% moved from a clinical range of self-reported anxiety to the non-clinical range.

Question 3. It was expected that social functioning would show an improvement after the group treatment for anxiety. This was not supported, no change was found in social functioning. Changes were examined by comparing pre- and post-treatment scores on the LSDQ, the FQQ, caregiver reported social problems and teacher reported social problems on the CBCL and the TRF. See Table 1 for the means and standard deviations. There were no significant changes to either child self-report measure with results of \(t(20) = .594, p = .56\), with low power at \(.087\) and \(t(20) = -1.5, p = .14\), with low power at \(.101\) on the LSDQ and FQQ respectively. The change in caregiver reports of children’s social problems was also not significant, \(t(19) = -1.18, p = .25\), with low power at \(.322\) as were teacher reports of changes in children’s social problems, \(t(12) = .15, p = .88\) with very low power at \(.052\).

Question 4. It was expected that school functioning would show an improvement after the group treatment for anxiety. This was not supported, no change was found in school functioning. Changes were examined by comparing pre- and post-treatment scores on the sum of teacher reported scales on the TRF: Working Hard, Behaving, Learning, and Happy (TRF Sum of 1,2,3,4). No significant change in school functioning was found, \(t(12) = .273, p = .79\), with low power at \(.057\). See Table 1 for mean and standard deviation.
Table 2

*Percentage of Children Falling in the Normal, Borderline and Clinical Ranges on the Anxiety Subscales*

<table>
<thead>
<tr>
<th>Measures</th>
<th>Pre-Intervention</th>
<th>Post Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CBCL Anxious-Depressed</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>35</td>
<td>60</td>
</tr>
<tr>
<td>Borderline</td>
<td>35</td>
<td>15</td>
</tr>
<tr>
<td>Clinical</td>
<td>30</td>
<td>25</td>
</tr>
<tr>
<td><strong>CBCL Anxiety Problems</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>25</td>
<td>55</td>
</tr>
<tr>
<td>Borderline</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>Clinical</td>
<td>55</td>
<td>20</td>
</tr>
<tr>
<td><strong>TRF Anxious Depressed</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>77</td>
<td>70</td>
</tr>
<tr>
<td>Borderline</td>
<td>8</td>
<td>15</td>
</tr>
</tbody>
</table>
Clinical 15 15

TRF Anxiety Problems

Normal 69 77
Borderline 8 8
Clinical 23 15

Note: n = 20 for all CBCL categories and n = 13 for all TRF categories

Exploratory Analysis. As has been presented above, mean changes after treatment were calculated, thus allowing this evaluation to be compared with previous research; however, the examination of mean group changes after treatment does not allow the direction of change for each participant to be revealed. A more in-depth analysis of the change participants experienced was desired; therefore, the number of participants who reported change in both directions or reported no change was calculated. Firstly, changes in childhood anxiety were examined. Of the 21 child reports collected, 13 (62%) endorsed fewer items tapping anxiety after treatment, 1 (5%) reported no change, and 7 (33%) endorsed more anxiety related items after treatment. Next, the 20 caregiver reports of child anxiety were examined. Twelve (60%) caregivers endorsed fewer anxiety related items after treatment, 5 (25%) caregivers reported no change, and 3 (15%) caregivers endorsed more anxiety related items after treatment. Finally, teacher reports of child anxiety were examined, of the 13 teacher reports collected, 4 (31%) endorsed fewer anxiety related items after treatment, 7 (54%) did not report any change, and 2 (15%) endorsed more anxiety related items after treatment. All findings are summarized in Table 3. Both the caregiver and teacher reports which endorsed more anxiety related items after treatment showed an increase of only one to two items, suggesting this could be due to chance. However, the child reports showed more variability with one child endorsing five more anxiety related items after treatment. Although there were no statistically significant increases in anxiety according to any of the informants, it is alarming to note that a fair percentage of participants endorsed at least one more item tapping anxiety after treatment than they did prior to treatment.

Table 3

<table>
<thead>
<tr>
<th>Measure</th>
<th>Decrease</th>
<th>No Change</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCMAS</td>
<td>13</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>CBCL Anxiety Problems</td>
<td>12</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>TRF Anxiety Problems</td>
<td>4</td>
<td>7</td>
<td>2</td>
</tr>
</tbody>
</table>
Note: n = 21 for the RCMAS, n = 20 for the CBCL, and n = 13 for the TRF

Analysis of Qualitative Data

In order to gain more information from the clients serviced, both children and their caregivers, a phenomenological qualitative component (Creswell, 1998) was used in conjunction with the quantitative measures being concurrently collected. This allowed for the experiences of the clients participating in treatment to be examined in more detail and allowed researchers to determine both the positive and negative aspects of the program, through the perspective of the client. First, all interviews were read in order to get a sense for each participant’s experience. Next, statements were grouped according to each question addressed in this evaluation. Endorsement for each research question was calculated by determining the percentage of participants in agreement or disagreement with each statement. The break down is presented in Table 4.
### Table 4

*Responses to Qualitative Interview Questions*

<table>
<thead>
<tr>
<th>Caregiver's and Children's Responses</th>
<th>Response (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Caregivers</strong></td>
<td></td>
</tr>
<tr>
<td>Reported the group was helpful to their child</td>
<td>85.7</td>
</tr>
<tr>
<td>Reported noticing their child's use the skills</td>
<td>81.0</td>
</tr>
<tr>
<td>Believed the treatment had an impact on social functioning</td>
<td>61.9</td>
</tr>
<tr>
<td>Believed the treatment had an impact on school functioning</td>
<td>57.2</td>
</tr>
<tr>
<td>Without prompting, reported that a teacher had spontaneously commented on the positive change in the child's functioning</td>
<td>14.0</td>
</tr>
<tr>
<td><strong>Children</strong></td>
<td></td>
</tr>
<tr>
<td>Reported the group was helpful to them</td>
<td>81.2</td>
</tr>
<tr>
<td>Reported using the coping skills in social situations</td>
<td>19.0</td>
</tr>
<tr>
<td>Reported using the coping skills at school</td>
<td>38.1</td>
</tr>
</tbody>
</table>
The following verbatim quotations reflect the diversity in the feedback received:

**Caregiver’s opinion on whether or not the group was helpful to their child:**

I think it helped her be able to break things down, to be able to have a coping mechanism on how to handle things, so that when things happened to you it’s not the end of the world. (P-2)

I think she has applied some of the things she has been taught, I can see some of her anxiety has lessened. (P-19)

I haven’t found it’s really helped her any. She’s still exactly the same. She hasn’t changed. (P-11)

**Caregiver’s observations of their child’s uses of the skills taught in the group:**

Before we came here he followed me around the house, as soon as I came in the house. Our house is small and he’d go from one room to another, I couldn’t even go to the bathroom without him being right beside me. Since the group, this has stopped. (P-18).

She has started to have large math tests, which before Christmas she was getting very nervous about. She wasn’t sleeping, she wouldn’t eat breakfast, didn’t want to go to school that day. She knew she was upset about it, but didn’t know how to deal with how she was feeling. Now she’s able to actually label how she feels, and she’s able to work through how she feels. She tells me what she’s going to do to get through the experience, and she’s done amazing on her tests. I attribute it to what she’s learned here. (P-23)

**Caregiver’s opinion on whether the treatment had an impact on social functioning:**

Before he just had one friend. I don’t know why but he only played with the boy who sits beside him. I asked his teacher and she said right now he’s more open and wants to play with others. (P-20)

I think he is more confident with his friends, so it has affected that, and he’s doing much better. Although, at lunch he is still with the lunch monitor, following him around instead of playing with his friends. (P-8)

I was hoping it would, but I don’t think it has. (P-3)

**Caregiver’s opinion on whether the treatment had an impact on school functioning:**

He’s not afraid to bring in his projects anymore. Before he would
just not do it, or he would do it but it would take forever to get done, or he was afraid he was going to get a bad mark. Now he’s not so afraid. (P-14)

It would make [functioning at school] better. I think it is really easy to be anxious and worried at school. There’s lots of things to think about and that is going to affect how you behave and how well you do. (P-8)

Children’s statements on whether the group was helpful to them:

Yes, because I’m worried about my brother and sister getting lost, and at home I use the FEAR plan because my brother and sister are usually upstairs or doing something. The FEAR plan helps me because now I usually don’t think that they ran away or something. (P-10)

I think the most helpful one was understanding how your body reacts. (P-12)

No [I didn’t find the group helpful]. (P-9)

Children’s statements whether they use the coping skills in social situations:

Well sometimes me and my friend get into a little fight, but I use the FEAR plan because sometimes I’m worried he won’t be my friend anymore, so I think to myself...well, he’s probably going to be my friend because we’ve been friends since kindergarten. (P-10)

Yeah. When they’re mad at me and I just want to say something, but I should stop and think. (P-16)

No, I never use them [in social situations], only at home. (P-6)

Children’s statements on whether they use the coping skills at school:

Well, I feel if I’m bad, my teacher might get mad at me, but even if she does get mad at me it’s not going to be that bad. (P-8)

We had this presentation for French, and I missed a week and came back and they told me I had this presentation. [I used the FEAR plan]. (P-15)

No, not really. (P-19)

Next, significant statements made by caregivers when asked to discuss their own experience generally, in the open-ended portion of the interview, were extracted from each transcription. Based on
the statements extracted from the interviews, clusters of themes were organised by combining statements addressing similar topics (Creswell, 1998). In the 21 interviews conducted, six prominent themes emerged when caregivers were asked to describe their experience with the group. These themes were as follows:

**Helpfulness of the program:** Caregivers found the group helpful to their child; they felt it had an impact on their child’s functioning. This theme was endorsed by eight caregivers. A verbatim quotation from one caregiver follows:

> [Jonathan] has caught on to it, he uses it all the time and he tells me to use it. I can see the difference; I can see that he us using it even though sometimes he is not verbalizing it. (P-8).

**Informative quality of the program:** Caregivers felt the group was informative for themselves. This theme was endorsed by five caregivers, a verbatim quotation from one caregiver follows:

> I find with my tension, I think I am getting a lot out of it because it is teaching me how to deal with a child with anxiety and little titbits about how to cope myself and help him talk things out. (P-17)

**Child’s enjoyment:** The child enjoyed coming to the group week after week. This theme was endorsed by four caregivers, a verbatim quotation from one caregiver follows:

> [Sam] enjoys coming, I think there is a child he has connected with. (P-10)

**Enjoyable interactions:** Caregivers enjoyed the interactions with the other caregivers, enjoyed discussing their child and hearing about other children. This theme was endorsed by three caregivers, a verbatim quotation from one caregiver follows:

> I can hear someone say [something] about their child [which] might be helpful for my son. I enjoy hearing that. (P-20)

**Wish for more involvement:** Caregivers wanted more information about what was taught in the group, and would have preferred to be more involved in the treatment process. This theme was endorsed by three caregivers, a verbatim quotation from one caregiver follows:

> I would have liked to have known a little bit more about what was going on each week. I think it was difficult because I didn’t know what was going on and [Alyson] didn’t say too much, so I wasn’t able to sort of monitor it for myself...I kind of felt in the dark about it. (P-1)

**No change in child’s anxiety:** Two caregivers found the group has not been very helpful for their child’s anxiety. A verbatim quotation from one caregiver follows:

> As far as our son is concerned I haven’t noticed a big difference at all. (P-24)

**Involvement as tiring:** One caregiver found it tiring to bring their child to treatment week after week:
For me it’s been a tiring 16 weeks on Tuesday night. (P-11)

Case Studies that Illustrate the Diversity in Data Collected

The small number of participants in this evaluation allowed for each case to be examined in more depth. The following are five examples of the quantitative and qualitative data obtained from participants. They are presented here to illustrate the heterogeneity of cases and the diverse constellations of change from the child, the caregiver, and the teacher perspective. Each table shows the direction of change, either a decrease (>), increase (<) or no change (=), as revealed in both the questionnaire and interview data to allow the two sources to be compared.

Case 1: Jonathan* age 6

A summary of changes for Case 1 is shown in Table 5.

Table 5

Changes from Pre-to Post-Treatment (Jonathan, P-8)

<table>
<thead>
<tr>
<th></th>
<th>Questionnaire data</th>
<th>Interview data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caregiver reported anxiety</td>
<td>&gt;</td>
<td>&gt;</td>
</tr>
<tr>
<td>Caregiver reported social functioning</td>
<td>&lt;</td>
<td>&gt;</td>
</tr>
<tr>
<td>Child reported anxiety</td>
<td>&gt;</td>
<td>&gt;</td>
</tr>
<tr>
<td>Child reported social functioning</td>
<td>&gt;</td>
<td>&gt;</td>
</tr>
<tr>
<td>Loneliness</td>
<td>&lt;</td>
<td>&gt;</td>
</tr>
<tr>
<td>Friendship quality</td>
<td>&lt;</td>
<td>N/A</td>
</tr>
<tr>
<td>Teacher reported classroom functioning</td>
<td>&lt;</td>
<td>N/A</td>
</tr>
</tbody>
</table>

* All names have been change to protect participant’s privacy

On the standardized measures, Jonathan’s mother reported a slight decrease in Jonathan’s anxiety, where as Jonathan reported a fairly large decrease. Jonathan’s mother reported a moderate increase in Jonathan’s social functioning, where as he reported a decrease; a moderate increase in loneliness and a large decrease in friendship quality. Jonathan’s teacher reported a very slight increase in classroom functioning.

The interview data from Jonathan’s mother revealed that she noted a great change in her son’s anxiety level. She gave the example of her son going up to the front alone during a church service, something he used to only do if his friends were present. This mother felt the treatment did have an
impact on school functioning and stated that in fact a teacher had approached her to say that she had noticed a difference in Jonathan’s functioning, a change the teacher also indicated in her evaluation. The mother also felt the treatment had an impact on social functioning, stating that her son was now more confident with his peers. Jonathan himself reported that the group was helpful to him. He reported using the coping skills taught at school to remind him that if his teacher gets angry, “it will not be that bad.” He also reported using the skills in social situations, for example, if he has no one to play with he reminds himself that “it will not always be that way.”

Case 2: Sarah, age 8

A summary of changes for Case 2 is shown in Table 6.

Table 6

<table>
<thead>
<tr>
<th>Changes from Pre-to Post-Treatment (Sarah, P-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direction of change after treatment</td>
</tr>
<tr>
<td>Questionnaire data</td>
</tr>
<tr>
<td>Caregiver reported anxiety</td>
</tr>
<tr>
<td>Caregiver reported social functioning</td>
</tr>
<tr>
<td>Child reported anxiety</td>
</tr>
<tr>
<td>Child reported social functioning</td>
</tr>
<tr>
<td>Loneliness</td>
</tr>
<tr>
<td>Friendship quality</td>
</tr>
<tr>
<td>Teacher reported classroom functioning</td>
</tr>
</tbody>
</table>

The standardized measures revealed that Sarah’s mother reported no change in Sarah’s anxiety after treatment, where as Sarah herself reported a substantial decrease. Her mother reported an increase in Sarah’s social functioning, as did Sarah, who reported a decrease in loneliness and an increase in friendship quality. Data from the teacher was not available in this case.

The interview data from Sarah’s mother revealed that she noticed a large improvement in her daughter’s coping abilities. She gave an example of her daughter being outspoken and confident in a performance situation, something she would not have done before treatment. This mother felt the treatment did have an impact on school functioning and stated that the teacher had reported noticing a change as well. Sarah’s mother felt that this type of treatment could affect social functioning, but that it did not in the case of her daughter. She felt that having positive reinforcement in school would have
helped her daughter learn to generalize to social situations. Sarah herself reported that the group was not helpful to her. She reported never using the coping skills at school or in social situations.

Case 3: Megan, age 12

A summary of changes for Case 2 is shown in Table 7.

Table 7

<table>
<thead>
<tr>
<th>Changes from Pre-to Post-Treatment (Megan, P-11)</th>
<th>Questionnaire data</th>
<th>Interview data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caregiver reported anxiety</td>
<td>&gt;</td>
<td>&lt;</td>
</tr>
<tr>
<td>Caregiver reported social functioning</td>
<td>&lt;</td>
<td>&lt;</td>
</tr>
<tr>
<td>Child reported anxiety</td>
<td>&gt;</td>
<td>&gt;</td>
</tr>
<tr>
<td>Child reported social functioning</td>
<td></td>
<td>&lt;</td>
</tr>
<tr>
<td>Loneliness</td>
<td>&gt;</td>
<td></td>
</tr>
<tr>
<td>Friendship quality</td>
<td>&gt;</td>
<td></td>
</tr>
<tr>
<td>Teacher reported classroom functioning</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

The standardized measures revealed that both Megan and her mother reported a substantial decrease in Megan’s anxiety levels. Megan’s mother reported an increase in Megan’s social functioning; however, Megan’s reports of social functioning were mixed. She reported a moderate decrease in loneliness; however, she also reported a substantial decrease in friendship quality. Data from the teacher was not available in this case.

The interview data from Megan’s mother revealed that she did not think that the group was helpful to her daughter and that she has not noticed her child using the coping skills. She did not feel that the treatment had an impact on classroom or social functioning. Megan herself reported that the group was helpful and that she has stopped worrying “so much about things” and made new friends. When asked whether she used the skills in school or with peers Megan reported that she did not.

Case 4: Kate, age 9

A summary of changes for Case 4 is shown in Table 8.

Table 8
Changes from Pre-to Post-Treatment (Kate, P-19)

Direction of change after treatment

<table>
<thead>
<tr>
<th></th>
<th>Questionnaire data</th>
<th>Interview data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caregiver reported anxiety</td>
<td>=</td>
<td>&gt;</td>
</tr>
<tr>
<td>Caregiver reported social functioning</td>
<td>&lt;</td>
<td>&gt;</td>
</tr>
<tr>
<td>Child reported anxiety</td>
<td>=</td>
<td>&gt;</td>
</tr>
<tr>
<td>Child reported social functioning</td>
<td>&lt;</td>
<td></td>
</tr>
<tr>
<td>Loneliness</td>
<td>&gt;</td>
<td></td>
</tr>
<tr>
<td>Friendship quality</td>
<td>&gt;</td>
<td></td>
</tr>
<tr>
<td>Teacher reported classroom functioning</td>
<td>&lt;</td>
<td>N/A</td>
</tr>
</tbody>
</table>

The standardized measures revealed that both Kate and her mother reported no change in Kate’s anxiety level after treatment. Her mother reported a moderate increase in Kate’s social functioning and Kate herself reported a fair decrease in loneliness; however, she also reported a slight decrease in friendship quality. Kate’s teacher reported a very slight increase in her classroom functioning.

The interview data from Kate’s foster mother revealed that she has noticed a change in her daughter’s behaviour and a decrease in her anxiety. The foster-parent reported that her daughter is now much calmer about her visits with her biological mother. She felt that the treatment did have an impact on Kate’s school functioning. She reported that her son and daughter are in the same class and that her son no longer comes home with stories about Kate’s behaviour during the school day. This foster-parent also felt the treatment had an impact on social functioning. She stated that her daughter no longer overpowers her peers when in group situations and that she can now wait her turn. Kate herself reported that the group has been helpful and that she uses the coping strategies for most situations in which she is worried or angry. She reported that she does not use the skills at school or in social situations.

Case 5: Alyson, age 10

A summary of changes for Case 5 is shown in Table 9.

The standardized measures revealed that Alyson’s mother reported a fairly substantial decrease in Alyson’s anxiety level after treatment; however, Alyson herself reported a moderate increase. Alyson’s mother also reported an increase in Alyson’s social functioning, where as Alyson reported the opposite, with an increase in loneliness and a slight decrease in friendship quality. Alyson’s teacher reported a slight increase in her classroom functioning.
Table 9

Changes from Pre-to Post-Treatment (Alyson, P-16)

<table>
<thead>
<tr>
<th></th>
<th>Direction of change after treatment</th>
<th>Questionnaire data</th>
<th>Interview data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caregiver reported anxiety</td>
<td>&gt;</td>
<td>&gt;</td>
<td></td>
</tr>
<tr>
<td>Caregiver reported social functioning</td>
<td>&lt;</td>
<td>&lt;</td>
<td></td>
</tr>
<tr>
<td>Child reported anxiety</td>
<td>&lt;</td>
<td>&gt;</td>
<td></td>
</tr>
<tr>
<td>Child reported social functioning</td>
<td>&lt;</td>
<td>&gt;</td>
<td></td>
</tr>
<tr>
<td>Loneliness</td>
<td>&lt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friendship quality</td>
<td>&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher reported classroom functioning</td>
<td>&lt;</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

The interview data from Alyson’s mother revealed that she has noticed that her daughter no longer has as many problems at home and that since the group she is now able to consider “multiple explanations” rather than always “jumping to a negative conclusion.” This mother reported no changes in her classroom or social functioning, stating that she never had concerns in these areas. Alyson herself reported that the group has taught her to cope better with her anxiety and to stop and think before acting. She reported using the skills at school while playing sports by stopping and thinking before she acts. Alyson also reported using the skills in social situations such as when her friends get angry, she stops and thinks before she responds.

These five case studies demonstrate the range, and complexity of the reports of change by participants, as well as the inconsistency between different informants.

Discussion

Changes in Anxiety

This evaluation examined the effectiveness of a widely used, empirically validated program for childhood anxiety (The Coping Cat Program; Kendall, 1990) as implemented in group format in a community clinic, with all the limitations and challenges that this entails. We expected anxiety would decrease after treatment, but that intervention effects in this setting might be less impressive relative to those reported in efficacy studies. The results confirmed both our expectations: child anxiety decreased significantly after treatment according to both caregivers and children. However, the multi-service community treatment was not quite as effective as in controlled studies (Kendall 1994; Kendall et al., 1997; Manassis, 2002). Furthermore, an examination of individual case studies revealed a quite complex picture of reported change. Generally, the current findings, based on standardized and interview data, support the effectiveness of a CBT group treatment when provided in a community (ecologically valid) setting.

Researchers have highlighted the need to bring empirically grounded treatments into community settings (Kendall & Choudhury, 2003). However, the assumption that treatment will result in similar outcomes in this setting cannot be made (Weisz et al., 1995). The aim of the current evaluation was to determine how effective CBT for childhood anxiety would remain when offered in a group format at a community clinic, given the lack of controlled conditions that are so integral to interventions provided in research clinics. As discussed above, it was found that indeed children’s anxiety decreased significantly
after treatment in this community sample. However, when clinically significant changes were examined it became apparent that these changes were not as extensive as those reported in previous efficacy studies (Kendall, 1994, Kendall et al., 1997). In the current evaluation, none of the six participants who entered the program with clinically significant levels of anxiety/depression shifted from that level to a non-clinical range: this is concerning. In contrast, efficacy studies have shown clinical improvement rates on anxiety/depression of 82.4% (Kendall, 1994) and 56.1% (Kendall et al., 1997). The findings that this kind of efficacy was not maintained in the community is consistent with previous research which has suggested that, in fact, most community studies do not produce significant effects (Weisz, Weiss, & Donenberg, 1992). In our evaluation, approximately one third of children’s caregivers actually endorsed more anxiety items after treatment. However, this is comparable to previous studies which have reported decreases in anxiety after treatment for approximately 70% of children serviced, suggesting that 30% either did not change or showed an increase in symptomatology (Barrett, Dadds, & Rappee, 1996, Kendall et al., 1997).

As community clinics are often the first line of treatment for children and families, this reported lack of treatment effectiveness is concerning. However, caution should be exercised in interpreting especially the standard quantitative data as meaning that the intervention had no effect. In fact, as illustrated through the above case studies, feedback provided on questionnaires sometimes contradicted the information shared in interviews, both in the case where quantitative changes were positive, and when the converse was true. As was evident, the interview data provided rich examples of children’s use of the skills taught in the program: for example, how new problem solving skills were acquired as a result of the Coping Cat group. It is thus very likely that the customary questionnaire evaluations do not fully capture the extent of change, including the skills that were acquired, and how they are being put to use by the clients who participate. It is also possible that prior to treatment many children lacked insight into their own anxiety. After participating in the group, children very likely had a better understanding of anxiety and its symptoms. This increased awareness to, and understanding of anxiety may have lead to some children to endorse a greater number of anxiety related items after treatment. Similarly, it should be noted that parents’ increased endorsement of anxiety-related items could also be an indication of heightened sensitivity to their children’s needs on the part of caregivers, which is not necessarily a negative development.

There are other possible explanations as to why treatment in this particular clinic setting was not as effective as in reported research clinic trials, in particular when assessed with standardized instruments. First, it may have been that the children referred from the community did not demonstrate anxiety levels that were as high as children in research clinic or hospital studies, making clinically significant changes less likely. All such studies include interviews with children and caregivers prior to treatment to determine whether the clients meet diagnosable levels of anxiety (Kendall, 1994; Kendall et al., 1997; Manassis et al., 2002; Wood, 2006). This is not the practice in most community clinics: here within-agency referrals were made to the group if a therapist in another program felt that her client could benefit from a group for anxious children, or if an intake worker deemed a child clinically anxious after the parent intake interview. If children did not initially begin treatment with high levels of anxiety, they would be less likely to show clinically significant improvements. Along similar lines, most research clinics distinguish between different forms of childhood anxiety prior to treatment and exclude any children who suffer primarily from phobias (Kendall, 1994; Kendall et al., 1997). Such is not common practice in the community; children are not differentiated, or excluded from treatment, based on the form of anxiety from which they suffer. Previous studies have also excluded children with IQ’s below 80 (Kendall, 1994). CBT relies on a substantial cognitive component; in order for it to be effective, children must have the cognitive capacity to understand it. It was known that many children in the current sample were in
special education classes at school; however, no attempt was made to evaluate IQ levels or to screen out those children who received services at school.

Researchers have pointed out that community samples are usually much more heterogeneous than comparable research clinic samples (Wiesz et al., 1995). In fact, the host treatment centre in this evaluation serves a high risk neighbourhood, and thus families with a multitude of challenges. The current sample, which was recruited mainly by within agency referrals, presented with many co-morbid conditions and other confounding variables such as complicated home lives. These factors are difficult to control when providing treatment in the community, and could be further contributors to lower effectiveness. This is not to suggest that children in university-based studies do not also suffer from co-morbid conditions. However, in those investigations co-morbidities are diagnosed and researchers and clinicians are made aware of which children suffered from multiple conditions (Kendall, 1994, Kendall, et al., 1997; Manassis et al., 2002; Wood, 2006). With large scale studies, research clinics can be selective about which participants to include and those with several uncontrollable extraneous variables can be excluded from analysis. Since we were studying treatment as it is typically offered, no participant could be excluded, as this is not common practice in publicly funded community treatment centres that have a mandate to serve all clients in a timely manner. Families participating in this evaluation included foster families, adoptive families, single parent families, families currently going through separation, and very low-income families, displaying a diversity that could have had an impact on treatment effectiveness. For example having an unstable home environment very likely reduces the effects of the treatment, as children are forced to deal with several concurrent issues at once, only one of which is anxiety (Kendall & Ollendick, 2004).

Finally, when treatment is conducted through research clinics, it is an accepted practice to collect data, and to require caregivers and children to complete questionnaires and interviews. The collection of data for research purposes is not yet common place in community settings. Clinicians still approach the collection of data with some reluctance, and caregivers are still often surprised when asked to participate in research activities. Although for they most part willing, participants, many find the completion of questionnaires time-consuming and burdensome, and may rush through them. This in turn could affect validity.

Changes in Social Functioning

No significant change was noted in social functioning after treatment using the standardized measures in this evaluation. This finding is consistent with those of Flannery-Schroeder and Kendall (2000) who also found that social functioning did not change after either individual or group CBT. However, both this and the present evaluation had conflicting results with those of Wood (2006) who found that reductions in anxiety lead to improvements in social functioning. There are several possible explanations as to why the current findings did not replicate those of Wood. The first is that Wood used a sample size which was twice as large as the current sample. It could be the case that there were subtle changes in social functioning, yet, due to the small sample size and low power in our evaluation, these were not identified. Also, Wood used a mainly two-parent, middle class sample, a sample quite different from the mainly low SES and high risk sample used in this evaluation. Many of the children in the present sample had complicated home lives and suffered from co-morbid conditions, all of which have an impact on social functioning. Finally, Wood used individual (one-on-one) therapy where as the present evaluation used group therapy. It could be that treatment in this form did not have an impact on social functioning. Perhaps children were not taught or were not able to generalize the skills learned in the group to social situations.
The interviews with children and caregivers provided a different perspective. Over half of caregivers interviewed reported a change in their children’s social functioning and many could provide examples. Over half of the children interviewed reported using the skills at least occasionally in social situations. It may have been the case that the changes were too subtle to be picked up with the standardized questionnaires, or perhaps the latter did not contain questions that were specific enough to identify changes in social arenas.

Although the standardized measures showed no significant changes, the qualitative data did lend support for the idea that the skills taught in this type of group may generalize to social situations. These results are promising and suggest that perhaps if specific changes were made to the group, the treatment could have a greater impact on social functioning.

**Changes in Classroom Functioning**

Changes to classroom functioning were also examined. As discussed above, teachers did not report any changes in anxiety after treatment, it was also found that teachers did not report any changes in general classroom functioning. Again, Wood (2006) was the first to examine this topic, finding that group treatment for anxiety did have an impact on school performance. The current evaluation does not support those findings. As already stated, this discrepancy too, could be due to the smaller and higher risk sample used. However, another important distinction between the two studies, which may account for the different findings, is that Wood used parent reports to assess classroom performance and the current evaluation used teacher reports. Caregivers were aware of the treatment and therefore perhaps were more likely to report a change because they were expecting one (Benedetti et al., 2003). In our evaluation teachers were not aware that any treatment was taking place and therefore had no reason to expect a change in the child’s functioning. For this reason, and the fact that caregivers are not with their children during school hours, it is believed that teacher reports of classroom functioning may be more valid. A limitation of the previous study pointed out by Wood was that they did not include teachers as informants.

The interviews with children and caregivers provided a different perspective. Approximately half of caregivers felt that the treatment had some impact on classroom functioning and approximately half of the children reported using the skills taught while at school. Some caregivers even stated that the teacher spontaneously reported noticing a change in the child’s functioning. Again, it may have been the case that the changes were too subtle to be picked up with the standardized questionnaires or that the measures were not sensitive enough.

Although the findings from the standardized measures did not lend support for the idea that the treatment generalizes to classroom functioning, the interview data suggest that perhaps it does, making this an area that is clearly worthy of further investigation. Because the qualitative findings suggest that the coping skills may, to some extent, generalize to classroom functioning, it is plausible that, were specific changes to be made to the group curriculum, their impact could be increased.

A small body of research has proposed that perhaps classroom teachers mislabel anxiety as inattention (Lahey, Schaughency, Strauss & Frame, 1985; Strauss et al., 1987). As was the case with anxiety problems, there was no significant change in teacher reported attention problems after treatment. However, teacher reports of inattention and anxiety, as well as anxiety and depression combined, were correlated. More research is needed to determine whether teachers do in fact mislabel the disorder; however, the finding suggests that teachers may sometimes misinterpret symptoms of anxiety as inattention, or may consider the two to be somewhat interchangeable. Because strategies
used in the classroom to help children with inattention are not the same as those used for children with anxiety (Sattler & Hodge, 2006), the current finding suggests that teachers may be dealing with children who have anxiety inappropriately. More research in the area is needed; however, the finding suggests that teachers should be made more aware of the symptoms of anxiety and be given strategies for dealing with children who suffer from anxiety in the classroom.

**The Complexity of Measuring Clinical Change**

Recently, the importance of including qualitative data collection methods into research designs has been acknowledged. Both quantitative and qualitative data were collected in this evaluation in order to gain a better understanding of participants’ experiences. A few unexpected findings arose during the analysis of the data. Firstly, there was the lack of congruence between matched quantitative and qualitative data. It was often the case that participants’ responses on standardized questionnaires did not match their responses provided during individual interviews, as was illustrated with the five case studies. Caregivers would often report a great deal of change in their child’s ability to cope with anxiety, but their questionnaire data would show no change, or in fact, a change in the opposite direction. There was no consistent pattern to the differences, so that they cannot easily be attributed to the need for social desirability in interviews, for example. As was also illustrated in the case studies, some participants experienced a great deal of change, while other did not, and in fact a few participants actually endorsed more items indicating anxiety after treatment. This is an issue in treatment research; however, it is not commonly addressed (Kendall & Choudhury, 2003). Finally, many of the reports from caregivers did not match those from children and vice versa, another issue common in this type of research (Yeh & Weisz, 2001). These findings highlight the need to move beyond examining mean changes in groups of participants, as such rich information can be captured when each participant is examined individually.

The mismatch between the quantitative and qualitative data, and the findings that some participants experienced no change, or in fact a change in the “wrong” direction, raises questions about the findings related to the treatment of childhood anxiety. This raises concern about whether or not the often-used standardized questionnaires are fully tapping into the process of change. At the very least, this finding suggests that it is simply not enough to use uni-modal data when assessing the effects of an intervention. When children and caregivers report no change, qualitative data allows for the examination of why they did not notice a change and what they feel could have increased their gains made through the group. This type of information may have implications for the improvement of subsequent groups. With the growing popularity of qualitative research, it will be important to compare outcomes for data collected through qualitative methods versus data collected quantitatively. It will be of interest to determine whether both methods yield similar findings and are therefore comparable and also to examine how they inform each other and how one can be used to assist in the interpretation of the other.

**Clinical Implications**

This evaluation confirmed that a community-based CBT group treatment for childhood anxiety was effective in reducing anxiety, as reported by children themselves and their caregivers, when overall pre- and post group means were examined. Though the magnitude of change observed in this context was not as large as in efficacy studies, an examination of participants’ narrative suggests that the latter acquire and apply useful skills through this type of intervention. These findings suggest that CBT treatment groups should continue to be provided in such settings, but that more research is needed to better examine effectiveness and the process of change in community samples. Moreover, it will be
imperative to routinely evaluate treatment if feasible, keeping in mind the desirability of using multiple informants and multiple methods, i.e. standardized measures as well as verbal reports, to obtain as complete a picture as possible of therapeutic change (or lack thereof). As well, it would be beneficial to explore, with young clients whose anxiety has not improved post-treatment, some of the reasons for this poor outcome, including the possible need for additional sessions and practice.

On another note, based on the themes arising from the current interview data with caregivers, treatment groups would likely benefit from more caregiver involvement. Many caregivers found the information sessions informative and especially enjoyed speaking with others about their children’s anxiety. However, many reported that they would have liked to be kept up to date on exactly what their children learn in the group each week. Keeping caregivers more informed about what their children are being taught may help them encourage their children to use the skills during the week, in real life situations. Barrett et al. (1996) has suggested that having families involved in treatment results in greater success than child treatment alone. Increasing caregiver involvement could be done through biweekly, rather than monthly, caregiver information sessions, or it might take the form of a handout that details what the children learned and how they can help them practice throughout the week.

Reductions in anxiety cannot be seen as the only means of measuring treatment effectiveness (Gladis et al., 1999) and, as the current evaluation did not find the treatment generalized to social and classroom functioning, suggestions to improve the treatment might include more structured discussions about situations that cause anxiety when relating to peers or when in the classroom. Current practice in the group is to deal with situations as the children bring them up. Children in group settings may be hesitant to discuss difficulties they are having with peers (Manassis et al., 2002). Although it is the hope that the children will be able to apply the skills taught to all situations in their lives, it may be necessary to specifically discuss social and school situations which are anxiety provoking. Therapists could preface the discussions by stating that most children feel anxious about situations that arise with other children their age, and list common worries. Children should be encouraged to think of other situations that may be difficult (not necessarily for them, but for any child). Coping strategies for each situation should be discussed in the group. By taking advantage of the group setting, leaders can have children role play different situations that arise with peers, in order to get a feel for what it would be like to use the coping skills in the presence of peers.

Last, a note on protocol fidelity: in their examination of adherence to the program manual, Kendall and Chu (2000) found that therapists’ use of flexibility when providing the ‘Coping Cat’ program (Kendall, 1990) did not have significant effects on treatment outcome. The researchers suggest that the use of flexibility within treatment may make the intervention more suitable and effective for clients. However, Kendall and Chu’s research was conducted using data on individual treatment, rather than data from group treatment. As group programs can not be tailored to meet each member’s needs specifically and simultaneously, adherence to the manual may be more important in this setting. Clinicians in the current context used their judgment to modify the treatment as they deemed necessary. Future groups may call for closer adherence to the manual, in an effort to maximize the outcomes for all group members. It will never be the case that one treatment model can be effective with all clients serviced, as has been demonstrated here and in previous research (Kendall, 1994, Kendall et al., 1997); however, every effort should be made to maintain the highest possible level of program fidelity in group programs particularly.
Limitations and Future Research

There were several limitations to this evaluation which are worth noting, first and foremost the small size of this clinical sample. Moreover, the sample was heterogeneous, with a wide age range, common conditions for community treatment, but a contrast to research clinic conditions. Finally, due to the time- and ethical constraints, no wait-list, or “treatment-as-usual” (TAU) control group were available, another constraint of conducting evaluation research in the community.

Several other, less substantial limitations to the evaluation should also be noted. First, children occasionally missed sessions or arrived late, therefore some participants received all 16 weeks of treatment whereas others received fewer sessions. As attendance could not be controlled, researchers kept track of each child’s attendance throughout the group to determine whether there were any differences between children who had absences and those who did not. Therapists’ absences also occurred, but that impact was lessened by the fact that three therapists lead each group. Some caregivers were at first hesitant to participate in the research component of the intervention, perhaps because it was unfamiliar to them, and the culture in community mental health centers has only recently shifted to include such activities. Although the measures taken to ensure confidentiality were explained to each participant, social desirability may have been an issue with some caregivers and children. Finally, clients were not grouped based on the different forms of anxiety with which they presented. It may have been the case that certain forms of anxiety respond better to treatment; however, this was impossible to differentiate, given the size of the data set.

Because this evaluation took place in a primary mental health care setting in the community, it was true to the actual conditions under which such programs usually run. In short, this research encountered all the challenges associated with treatment as provided in a community clinic, and is thus able to offer some insights in this regard. As such, further research is sorely needed in the effectiveness of community-based CBT for childhood anxiety (Kazdin & Kendall, 1998). Larger sample sizes are desirable, and aggregating data over time, or from different centers, should be considered as a strategy. In addition, the current evaluation’s finding that quantitative and qualitative outcome data are not always coherent deserves further investigation. It will thus be important to include more qualitative methodology in future studies to allow for greater depth in understanding the change process for anxious children. As has been demonstrated in this evaluation, the collection of interview data, in addition to standardized measures, is crucial to gaining a clearer view of participants’ experiences. It will also be vital to begin to differentiate between children who consistently report that treatment is helpful and those who do not experience symptomatic relief. Distinguishing between these groups will allow researchers to determine for whom this intervention is the most helpful, and what approaches may need to be developed to assist those clients who do not currently benefit from the protocol as delivered. Research has pointed out, that in order to maximize the effectiveness of treatment, the mechanisms leading to change must be examined (Kazdin & Nock, 2003). A more thorough analysis of differential effectiveness will allow us to begin to determine what exactly leads to change during treatment. It will be important to understand not only those children who did not improve, but children at the other extreme of the treatment spectrum as well: those for whom the intervention worked extremely well. For young clients who report a lack of symptom relief consistently across modalities, it will be crucial to address what other methods might be best suited to treating their anxiety, or what additional components could be added to their treatment (for example a motivational module). Wait-list, and TAU control data should also be collected in the future if at all feasible, to allow community researchers to conclusively state that any observed changes in their clients are in fact due to the treatment process.
In summary, based on the findings that the skills taught in this CBT group did not benefit all participating children, nor help them reach the same clinically significant levels of improvement as reported in similar efficacy studies, it will be crucial to explore, in future research: (a) whether the adherence to program protocol by community therapists is adequate, (b) what changes might be made to this type of treatment program in order to enhance effectiveness, and (c) how children who might benefit from this type of intervention can be better differentiated from those who might not.

Conclusion

This evaluation was among the first to examine the effectiveness of an evidence-based group CBT approach to childhood anxiety in a community clinic, using both standardized and qualitative measurement. Overall, our findings suggest that treatment can indeed be adapted and run effectively in such a setting; however, outcomes did not reach the same magnitude as those reported in similar research clinic studies. Given a lack of consistency between qualitative and quantitative outcome reports, some questions were raised about the adequacy of typical measurement of symptom relief. Future research must continue to examine treatment as it is typically run in the community, both to determine what factors optimize or impede effectiveness, and also to examine how the treatment may or may not generalize to other areas of children’s functioning. Ontario Community mental health centers are often the first place parents turn to for support, it is therefore imperative that these centers be equipped to offer the most effective treatment possible.
References


Knowledge Exchange Plan

To date, the findings from this research project have been presented in several forums and there are plans to continue to share this work. Due to the nature of the evaluation, there are several different aspects of the findings that can be highlighted, depending on the audience to whom the information is presented. These include: the fact that the *Coping Cat*, an evidence-based program, can be adapted and run effectively in the community, the challenges involved in conducting evaluation research in a community setting, the potential recommendations from the findings regarding generalizability, and incongruence between qualitative and quantitative data.

Knowledge exchange this has far has taken the following format:

Presentations

1) Clinical Research Day – Aisling Discoveries Child and Family Centre, October 29th, 2007

   The Effectiveness and Generalizability of Community-Based CBT for Childhood Anxiety

   This presentation was done by one of the primary researchers in combination with one of the clinicians at Aisling who has been active in providing the group to clients. The purpose of this presentation was to share, with other clinicians, the early pilot findings of our research as well as the challenges to conducting research in a community setting. Research is not typically conducted in these settings and therefore some clinicians are apprehensive about combining their treatment programs with evaluation projects. The audience of this presentation was the staff at the agency, and several partner agencies, and one of the aims of the presentation was to foster an interest in evaluation research in the clinicians and therefore create a more positive attitude towards it.

Articles

1) An article will be submitted to the Journal of Cognitive and Behavioural Practice:


2) A second article is in preparation, and will be submitted to the Canadian Journal of School Psychology:


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**Future Knowledge Exchange Plans:**

1) A proposal for a symposium at the 2008 Meeting of the Association of Behavioral and Cognitive Therapies has been submitted for consideration:

   *Cognitive Behavior Interventions for Children and Youths: From Research Trials to Community Based Adaptations (Yvonne Bohr, Chair).*

   This symposium is a collaboration between five independent research teams from Canada and the US, all who have collected treatment outcome data in community settings. Our contribution to the symposium will be to present on the obstacles we faced while conducting research in this setting, and suggestions for how to improve this process for future research projects.

2) A proposal for a poster to be presented at the same conference has also been submitted:


   This poster will focus on the generalizability of the treatment to other area of children’s lives. The implications of our mixed findings on the topic will be discussed and recommendation for future treatment groups will be discussed.

3) A second poster will be presented at the Conference on Promoting Youth Development, Reducing Risks and Preventing Violence, Wednesday, June 4, 2008. This conference is hosted by: the LaMarsh Research Centre, Faculty of Health, York University. Location: York University, Keele Campus, Schulich Executive Learning Centre.


   This poster will present the results of our evaluation and highlight the importance of conducting research in the community.

4) Aisling Discoveries may also host another presentation for community partners and other stakeholders to come and learn about the evaluation research completed at the agency with the support of the Centre of Excellence, including lessons learned during this process. Our findings about the effectiveness of the program would be shared as well as the importance of collecting outcome data in community settings and building strong relationships between clinicians and researchers. It is hoped that this may encourage other mental health centres to consider collecting research in their settings.
APPENDIX A: Consent Forms for Parents

RESEARCH CONSENT

INTRODUCTION: The agency is committed to evaluating the services and programs that are provided to families and children in order to ensure their effectiveness and efficiency. We are also committed to contributing to new knowledge and understanding in the area of child treatment.

You are being asked to participate in a project that looks at how well children with anxiety respond to a group program designed to help them change the way they think about their fears. We are also studying how parents’ own feelings are related to their children’s, and how helpful parents’ participation is in this program.

This Study is overseen by Dr. Yvonne Bohr, C.Psych., principal investigator. Yvonne can be reached at 416-321-5464 ext. 229 if you should have further questions about this study. This study has been approved by the agency’s research and ethics committee and the York University Human Participants Review (‘Ethics’) Sub-Committee. If you have any questions/concerns about this research, you can reach the HPR office at 416-736-5055 (research@yorku.ca).

TOPIC: “Cognitive Behavioural Treatment for Childhood Anxiety: An Examination Of The Differential Value Of Parent And Child Components Of A Group Program”

PARTICIPATION: Your participation, and your child’s participation in this study would involve:

For your child:

➢ Filling out of 2-3 questionnaires about symptoms of anxiety, once before the group program begins, and once after the group program has ended
➢ Participation in a short follow-up interview about the group program (10 to 15-minute) after the group has ended

For you:

➢ Filling out of 4-5 questionnaires about symptoms of anxiety for yourself and your child, once before the group program begins, and once after the group program has ended
➢ Participation in a short follow-up interview (10 to 15-minute) after the group has ended

We are encouraging all parents to participate, but should you choose not to participate in the research, the services that your family receives at Aisling Discoveries will not be affected in any manner.

If you choose to participate, you may withdraw from this study at any time, even after having signed this form. You are free to refuse to answer any question during the interview, and may terminate the interview at any time.
CONFIDENTIALITY: Any information that is collected will be kept confidential, in a secure location, for 5 years. Your name will be removed from any data collected from you. Instead, a number will be assigned to the tape and transcript of your interview, and only the principal investigator and her assistant(s) will have access to the list of names of participants. The information you share will be combined with other participants’ information, and you or your child will never be identified in any way if/when the results of this study are published.

Please indicate below your agreement to participate in this research.

Parent Name: ________________________ Phone Number: ________________________

I UNDERSTAND THE PURPOSE AND THE TERMS OF THE PROJECT DESCRIBED ABOVE AND AGREE TO PARTICIPATE IN THIS RESEARCH STUDY.

Parent / Guardian Signature ________________________ Print Name ________________________ Date ________________________

Signature of Witness ________________________ Print Name ________________________ Date ________________________

RESEARCH CONSENT

As part of this research, we are collecting information regarding classroom outcomes of the children who participate in the program. We are interested in how the skills learned in these sessions are generalized to your child’s classroom functioning.

If you choose to give permission, a questionnaire will be mailed to your child’s teacher. This is a general questionnaire that asks about all aspects of classroom functioning, not anxiety in particular. We will send a note along with the questionnaire explaining that you and your child have volunteered to be part of a research study.
which is affiliated with York University. We will explain that we are interested in the teachers perceptions of your child’s classroom functioning. We will not reveal that your child is part of a treatment group, only part of a research study, and no information about the treatment will be shared with the classroom teacher. The teacher will be given a self-addressed stamped envelope in which he or she can return the questionnaire. The address will be that of Dr. Yvonne Bohr’s at York University, and will in no way identify Aisling Discoveries as a part of the research.

Any information that is collected will be kept confidential, in a secure location, for 5 years. Your child’s and his or her teacher’s name will be removed from any data collected. Instead, a number will be assigned, and only the principal investigator and her assistant(s) will have access to the list of names of participants. The information you share will be combined with other participants’ information, and you or your child will never be identified in any way if/when the results of this study are published.

This Study is overseen by Dr. Yvonne Bohr, C.Psych., principal investigator. Yvonne can be reached at 416-321-5464 ext. 229 if you should have further questions about this study. This study has been approved by the agency’s research and ethics committee and the York University Human Participants Review (‘Ethics’) Sub-Committee. If you have any questions/concerns about this research, you can reach the HPR office at 416-736-5055 (research@yorku.ca).

Please indicate below your agreement to participate in this research.

Parent Name: ____________________________ Phone Number: ____________________________

I UNDERSTAND THE PURPOSE AND THE TERMS OF THE PROJECT DESCRIBED ABOVE AND AGREE TO PARTICIPATE IN THIS RESEARCH STUDY.

____________________________ _________________________
Parent / Guardian Signature Print Name Date

____________________________ _________________________
Signature of Witness Print Name Date
Assent

Assent is obtained from participants in the following way:

Pre-treatment data collection:

Firstly, the research assistant(s) introduce themselves to the children and explain who they are, namely that they go to school at York University and are doing a project around the Coping Cat group. It is explained to the participants that the project looks at change and that they will be asked to fill out questionnaires at the beginning and at the end of the group.

Note: For children ages 9 to 12, assent to complete the questionnaires is done in a group setting. For children ages 6 to 8 it is done individually.

Confidentially is explained to the children. It is made clear that this project is separate from the treatment and that the forms they fill out are private and will not be shared with their group leaders. Also, each form is marked with a participant ID number and children are told not to write their names on their forms to emphasize that their responses are confidential.

Post-treatment data collection:

Upon completion of the group, the research assistant(s) return and remind the children of who they are and what they are doing. They refresh their memory about completing the questionnaires at the beginning of the group and reemphasize confidentiality.

After the questionnaires are complete, each child is interview individually. Prior to the interview, confidentially is again explained and the fact that regardless of whether they share positive or negative information, nothing they say will be revealed with the group leaders. Permission to audio record the interview is attained and each participant is introduced on the tape by ID number, rather than name.

Should a child not want to participate in the research, this would in no way affect the treatment they receive.
Research Consent – Teacher Copy

I hereby give permission to the research team, Dr. Yvonne Bohr and Jennifer Summers, to obtain information regarding my child, _____________________, from _____________________’s classroom teacher, _____________________, at _____________________ part of the group research project in which my child is involved. I grant permission to _____________________ school, specifically _____________________, to provide the research team, Dr. Yvonne Bohr and Jennifer Summers, with the following information: a child behaviour questionnaire, to be used solely for the purposes of the research project and subject to the same restrictions as the other data collected for the purpose of this project.

__________________________
Parent / Guardian Signature

__________________________
Signature of Witness

__________________________
Print Name

__________________________
Date

__________________________
Print Name

__________________________
Date

Research team contact information:

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Toronto ON
M3P 1P3
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APPENDIX B: Interview Questions for Caregivers and Children

Questions for Caregivers

1. Tell me about your experience with this group.
   - If they say it helped my child, go to #3.
   - If they don’t, go to #2
2. Was the group helpful?
   - If no, then say tell me more about that.
3. How do you think this group has helped your child?
4. Can you think of any example you have noticed of your child using the skills she has learned?
5. Do you think this type of treatment has an impact on school functioning?
6. Do you think her teacher has noticed a difference?
   - If yes, What do you think the teacher has noticed?
7. Have you noticed changes in your child’s school functioning? Can you rank how much or little you child has improved on a scale from 1 to 5?
   - If yes, how has your child changed?
   - If no, what do you think would be needed to affect your child’s school functioning?
8. Do you think this type of treatment has an impact on peer relationships?
9. Have you noticed changes in your child’s peer relationship? Can you rank how much or little you child has improved on a scale from 1 to 5?
   - If yes, how has your child changed?
   - If no, what do you think would be needed to affect your child’s peer relationships?
Questions for Children

1. Did you find this group helpful?
2. Are you using the skills you learned in the group at school?
3. Do you find them helpful at school?
4. Is there anything you can think of that would have helped you learn to use the skills at school?
5. Are you using the skills you learned in your relationships with your friends?
6. Are the skills helpful for dealing with friends?
7. Is there anything you can think of that would have helped you learn to use the skills with your friends?
Copies cannot be provided of standardized questionnaires due to copyright laws.