Feasibility of an Anxiety Preventive Intervention for Community Violence Exposed African-American Children

Article in The Journal of Primary Prevention · September 2004
DOI: 10.1023/B:JOPP.0000039941.85452.ea

3 authors, including:

Rhonda C Boyd
The Children’s Hospital of Philadelphia and University of Pennsylvania
50 PUBLICATIONS 1,290 CITATIONS

All content following this page was uploaded by Rhonda C Boyd on 16 May 2014.

The user has requested enhancement of the downloaded file.
Feasibility of an Anxiety Preventive Intervention for Community Violence Exposed African-American Children

Michele R. Cooley, Rhonda C. Boyd, and Judy J. Grados

Investigated the feasibility of using an anxiety preventive intervention efficacious with Australian children with inner-city African-Americans (aged 10–11) who experienced moderate anxiety problems and community violence exposure. Of 91 fifth-grade students, ten participated in the school-based selective preventive intervention that targeted anxiety disorders. In this pilot study, qualitative and quantitative analyses revealed significant decreases in general anxiety and manifestations of anxiety that were contextually relevant to the community violence exposed youth (i.e., physiological symptoms, worry regarding environmental pressures, and concentration difficulties). The discussion focuses on the modifications necessary to make the prevention program culturally and contextually appropriate for anxious inner-city African-American children.

KEY WORDS: anxiety prevention; community violence; African-American children; school-based.

Anxiety disorders are a significant public health problem given that they are among the most common childhood psychiatric disorders (cf., Bernstein & Borchartd, 1991). Estimates of community samples reveal that between 10–20% of school aged children meet criteria for at least one type of anxiety disorder (Kashani & Orvachel, 1988; McGee et al., 1990). The more generalized disorders, such as overanxious disorder, social phobia, and separation anxiety disorder, affect 5–10% of all children in the United States (Costello, 1989). Further, children with anxiety disorders who do not receive treatment may be at risk for developing new psychiatric diagnoses (Last, Perrin, Hersen, & Kazdin, 1996) and experiencing long-term
impairment (cf., Dadds, Spence, Holland, Barrett, & Laurens, 1997). Anxiety disorders may severely compromise a child’s functioning and are associated with social isolation, interpersonal difficulties, and impaired social competence and school adjustment (cf., Klein & Last, 1989; Messer & Beidel, 1994).

Child anxiety problems may also have long lasting effects. For instance, anxious adults often report that their anxiety first began in childhood (Rapee & Barlow, 1993). Adult anxiety disorders are related to clinically significant depression, increased use of alcohol, anxiolytic agents and other drugs (Amies, Gelder, & Shaw, 1983; Liebowitz, Gorman, Fyer, & Klein, 1985; Turner, Beidel, Dancu, & Keyes, 1986; Schneier, Johnson, Hornig, Liebowitz, & Wiessman, 1992). Functional impairment such as incomplete educational attainment, lack of career advancement (including diminished capacity to work and financial loss), and severe social restriction has also been documented (Liebowitz et al., 1985; Rosenbaum, Biederman, Bolduc-Murphy et al., 1993; Turner et al., 1986). Furthermore, anxiety disorders are a particularly relevant public health problem because they are the most prevalent form of psychopathology in children and adults (Rosenbaum et al., 1993). Collectively, these reports demonstrate the deleterious public mental health impact of anxiety disorders on individuals and society.

A multitude of societal factors influence the onset and perpetuation of anxious symptoms in children. Community violence is a potentially salient contributor to anxiety in urban youth. Many inner-city youth today live in conditions similar to war zones (Garbarino, Kostelny, & Dubrow, 1991). Although the direct victims are obvious, the indirect victims are far more numerous. They are affected because they are bystanders, witnesses or familiar with victims, or are cognizant of or anxious about the potential for violence (Lorion, 1998).

Children’s exposure to violence has significant adverse effects on their development and functioning (Jenkins & Bell, 1994; Martinez & Richters, 1993). For example, exposure to community violence has been associated with posttraumatic stress symptoms, internalizing problems, and externalizing problems (Cooley-Quille, Turner, & Beidel, 1995; Duncan, 1996; Kliewer, Lepore, Oskin, & Johnson, 1998). Youth growing up in urban environments with high levels of poverty, overcrowding, and violence show a wide range of maladaptive outcomes, including anxiety, posttraumatic stress symptoms, depression, school disengagement and academic difficulties (Gibbs, 1984; Myers, Taylor, Alvy, Arrington, & Richardson, 1992). The academic difficulties have been suggested to result from lowered concentration levels due to distracting and intrusive thoughts concerning violent events (Taylor, Tucker, Chatters, & Jayakody, 1997), consistent with anxiety symptomatology. A study demonstrated that community violence exposure predicted posttraumatic stress and separation anxiety symptoms in inner-city youth, thus suggesting a significant link between community violence exposure and anxiety symptomatology (Cooley-Quille, Boyd, Frantz, & Walsh, 2001). Collectively, the evidence suggests that living in violent communities engenders anxiety and
other forms of emotional distress in children. While the link between community violence and anxiety disorders is complex and warrants continued investigation, it is clear that preventive interventions and effective treatment are needed that target the emotional consequences of community violence.

There is limited treatment research on childhood anxiety disorders (Ollendick & King, 1998; Barrett, 1998), and the majority of it involves clinical samples. Of the types of psychosocial treatments evaluated, cognitive-behavioral and behavioral therapies are empirically promising (cf., Hibbs & Jensen, 1996; Ollendick & King, 1998). Among these are clinical child interventions conducted individually (e.g., Kendall, 1994; Kendall, Flannery-Schroeder et al., 1997; Kendall & Southam-Gerow, 1996) and with a family component (e.g., Barrett, Dadds, & Rapee, 1996). Group interventions promote peer support, allow for the sharing of resources, and provide the opportunity to model desirable behaviors and reinforce responses (e.g., Albano, Marten, Holt, Heimberg, & Barlow, 1995; Kazdin, 1994). Group formats, either with or without family therapy, have been used efficaciously with anxious children (e.g., Barrett, 1998). These and other clinical studies demonstrate that childhood anxiety disorders can be effectively treated in individual and group settings, with and without family therapy.

Although some controlled trials of interventions with clinically referred anxious children have been conducted, preventive approaches have been more rarely applied to school and community samples (Dadds et al., 1997). Applications in school-based settings are important because they provide efficient access to large numbers of children (Samples & Aber, 1998) and target larger community samples of at-risk children instead of the comparably few children who are referred to mental health clinics. The fact that they are cost-effective also makes school-based interventions worthwhile. Moreover, prevention programs can help children develop coping skills and competencies beneficial for interpersonal functioning (Bruene-Butler, Hampson, Elias, Clabby, & Schyler, 1997). Dadds et al. (1997) implemented the Coping Koala program (Barrett, Dadds, & Holland, 1994) in a school setting with 7 to 14 year old children who were anxiety-sensitive or had an anxiety diagnosis. The intervention and no-treatment control groups did not differ at postintervention, but 6 months later, the intervention group maintained their gains and had lower rates of anxiety diagnoses than the control group. Follow-up assessments showed that both groups were similar at 12 months; however, fewer anxiety diagnoses were present in the intervention group than the control group at 24 months. These results demonstrate that school-based interventions can be successful in reducing the rate of anxiety disorders and preventing the onset of new disorders in Australian children.

Prevention researchers recommend that prevention programs are founded on strong theoretical models, empirically tested, and then adapted to the intended population (Coatsworth, Szapocznik, Kurtines, & Santisban, 1997; McCord & Tremblay, 1992; Yung & Hammond, 1998). The purpose of this paper is to
describe the results of a pilot study designed to investigate the feasibility of using the FRIENDS anxiety prevention program, a group-oriented cognitive-behavioral program that teaches children strategies for coping with anxiety, with an at-risk population: African-American children attending an elementary school in a violent area of a major metropolitan city. Intervening with urban children, especially ethnic minority youth, is important because they are disproportionately affected by violence (Attar, Guerra, & Tolan, 1994; Bureau of Justice Statistics, 1990, 1991). Additionally, research on anxiety disorders of ethnically diverse children is sparse (Safren, Gonzalez, Horner, Leung, Heimberg, & Juster, 2000) and there are no known published studies focusing on the prevention of anxiety disorders among African-American youth. The current project is a selective prevention project. The children had mild to moderate anxiety symptomatology or disorders, the latter of which places them at-risk for adult anxiety disorders (Pine, Cohen, Gurley, Brook, & Ma, 1998). The pilot study was undertaken to identify the modifications necessary to make the cognitive-behavioral program culturally, ethnically, and contextually appropriate for this population given its contrast to the Australian, middle socioeconomic status (SES) school sample involved in the Dadds et al. (1997) study. The assumption was that the theoretical foundation for the preventive intervention would apply universally and be culturally appropriate for the targeted population.

**METHOD**

**Procedure**

*Screening and Selection*

One public elementary school was chosen for the pilot study. It was selected because it was located in an inner-city, low-socioeconomic, high crime neighborhood. The district in which the school is located has had the highest crime rate per capita of all the city’s districts for the past several years. For example, in 1997, the four square mile district had 2,391 violent crimes reported to police and had the most juvenile arrests in the city (Hawkins & Crowel, 1998). The preintervention screening procedures used to identify eligible youth involved four levels. They were similar to those established by Dadds et al. (1997) because the authors wanted to focus on the feasibility of the intervention using methods that yielded efficacious results with the Australian sample.

*Screening 1.* All the fifth graders \((n = 91)\) in the school’s regular education or resource classes were targeted to be administered an anxiety self-report measure, the Revised Children’s Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978). Before RCMAS administration, letters of notification of the screening were sent to parents with an option to decline participation. Consent and assent were gathered from 89% \((n = 81)\) of this initial target sample. Thirty-five males and 46
females were screened. The RCMAS was read aloud by the first two authors to
each classroom while students circled yes/no responses to the questions. Children
who did not assent to participate remained in the class and made drawings. All 91
students received a calculator as a reward regardless of whether they completed
the RCMAS or not.

**Screening 2.** Teacher nominations were performed in each of the four class-
rooms, using the same procedure and descriptive vignettes used in the Dadds et al.
(1997) study. In each class, teachers nominated a maximum of three students who
displayed the most anxiety and a maximum of three children who displayed the
most disruptive behavior (the latter is an exclusion criterion, as in Dadds et al.’s
procedures).

**Screening 3.** This phase developed a list of potential subjects \( n = 37 \) for
further assessment. Children were included if they: 1) Had a RCMAS clinical
cut-off score of 17 or more for girls and 14 or more for boys (these raw scores
were equivalent to a T-score of 51 for both genders); or 2) Were included in the
teachers’ nominations of anxious children. However, children were excluded if
they: 1) Were in a special education classroom because of the FRIENDS program’s
reading and writing requirements; or 2) Were included in the teachers’ nominations
of extremely disruptive children.

**Screening 4.** Parents of children included on the list developed in Screening
3 were contacted by mail and asked permission for their child to be involved in a
psychiatric interview and to participate in the FRIENDS intervention program if
selected. Active parental consent was collected from 30\% \( n = 11 \) of the eligi-
ble students. These children were verbally administered the self-report measures
in pairs of students. The structured psychiatric diagnostic interviews were con-
ducted individually. The students considered at-risk were invited to participate in
the FRIENDS preventive intervention program. “At-risk” children had features of
an anxiety disorder or a mild DSM-IV (APA, 1994) anxiety diagnosis (i.e., ob-
tained a clinical severity rating between 1 and 5 based on an ADIS-C scale from
0 to 8; 8 indicated a very severe anxiety disorder) and could not exhibit primarily
externalizing behaviors. Any child with a severity rating of 6 or more was re-
ferred for further evaluation and possible treatment; one such child was referred
to a community mental health agency. Overall, ten children were eligible for the
FRIENDS program and comprised the intervention group. Excluding the teacher
nominations, the entire pretest assessment battery was readministered two weeks
following the final group intervention session to obtain postintervention data. Each
student was given a toy valued at five dollars at both the pretest and posttest as a
token of appreciation for participating in the assessments.

**Participants**

There were ten children who participated in the FRIENDS program, eight of
whom were female. All participants were African-American. Race was
determined by the children’s self-report on the RCMAS. The mean age was 10.2 years (SD = 0.42). Seven (70%) of the participants had at least one anxiety diagnosis, while three (30%) had subthreshold levels of a DSM-IV (APA, 1994) anxiety disorder. Sociodemographic information was gathered from eighty percent of the parents/caregivers via mail and telephone. Eighty-eight percent were employed, while twelve percent were unemployed. Family income was distributed as follows: 38% earned from $10,000 to $14,999; 25% earned $15,000–$24,999; and 38% earned $25,000–$30,000. The majority (87.5%) of the caregivers had at least a high school diploma.

The current study’s FRIENDS participants differed from the Australian sample on a number of dimensions. First, the Australian students were primarily Caucasian and from working-to-middle class families (Dadds et al., 1997) whereas this sample was African-American and from low-to-impoverished socioeconomic backgrounds. Second, although both studies’ samples resided in metropolitan areas, community violence exposure was not assessed in the Australian FRIENDS study although it was the focus of the American inner-city study. Third, the RC-MAS cut-off scores used in this study were lower than those in the Australian study, even though both studies’ participants exhibited mild to moderate anxiety problems suggesting cultural differences in endorsing anxiety symptoms on the screening measure. Lastly, the physiological symptoms and emotions associated with anxiety appear similar across cultures although their primary anxiety-provoking stimuli may differ by context and culture.

Measures

Diagnostic Interview

The Anxiety Disorders Interview Schedule for Children (ADIS-C; Silverman, 1991; Silverman & Nelles, 1988; Silverman & Albano, 1996) is a semistructured psychiatric interview designed to assess current diagnoses based on the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition diagnoses (DSM-IV; APA, 1994). It has an overall kappa of .75 and retest reliability correlation of .71. Studies report its utility (Rapee, Barrett, Dadds, & Evans, 1994) and reliability (Silverman & Rabian, 1995). Doctoral level child clinical psychologists conducted the interviews. A licensed psychologist who was previously uninvolved in the project and blind to preintervention diagnoses conducted the postintervention interviews.

Self-Report Measures

The Children’s Report of Exposure to Violence (CREV; Cooley, Turner, & Beidel, 1995) is a brief, 32-item self-report instrument that assesses youth’s
Feasibility of Anxiety Prevention

(ages 9 to 18) lifetime and past year exposure to community violence (Cooley et al., 1995). Twenty-nine of the items are rated on a five-point Likert scale that assesses frequency of exposure to community violence via various modes (i.e., media, hearsay, direct witness, direct experience). The types of violent situations include being chased or threatened, beaten up, robbed or mugged, shot, stabbed or killed. For example, “Have you ever seen a stranger being robbed or mugged?” “Have you ever been chased or threatened?” The Total score ranges from 0 to 116 and is derived by summing the responses on the 29 scored items. The CREV has high internal consistency for both lifetime ($\alpha = .93$) and past year ($\alpha = .97$) reports (Cooley, Turner, & Beidel, 1995; Cooley-Quille & Boyd, 2000). Normative data for the primarily African-American samples are available for different gender, race and age groups (Cooley et al., 1995).

The Children’s Depression Inventory (CDI; Kovacs, 1979) is a 27-item measure of depressive symptoms. It is widely used, has good internal consistency ($\alpha = .86$), validity and one-month test-retest reliability ($r = .72$; Kovacs, 1980/1981).

The Multidimensional Anxiety Scale for Children (MASC) is a 39-item self-report instrument that measures a broad range of anxiety symptoms in children aged 8–19 (March, Sullivan, Stallings, & Conners, 1997). It has three-month test-retest coefficients ranging from .70 to .93 and internal consistency alpha coefficients ranging from .51 to .88 (March & Parker, 1999).

The Revised Children’s Manifest Anxiety Scale (RCMAS) is a 37-item, psychometrically sound self-report measure of multidimensional anxiety symptoms (Reynolds & Richmond, 1978, 1979). Norms have been established for African-American, Caucasian, male, and female youth aged 6–19 years of age (Reynolds & Paget, 1981). The RCMAS has factors and subscales as well as a total score.

The Social Skills Rating System (SSRS; Gresham & Elliott, 1990) is a 34-item self-report measure that assesses children’s social skills (i.e., cooperation, assertion, responsibility, and self-control). Norms have been established for males and females in grades 3–12. It has good internal consistency ($\alpha = .83$) and adequate four-week test-retest reliability ($r = .68$; Gresham & Elliott, 1990).

The Test Anxiety Scale for Children (Sarason, 1975) is a 30-item true/false questionnaire that measures children’s anxious feelings, thoughts, and symptoms in school and on tests. It has been used in published studies of anxious youth (e.g., Beidel, 1991). Sample items include: “Do you worry a lot before you take a test?” “Do you sometimes dream at night that you are in school and cannot answer the teacher’s questions?”

**Teacher Report**

Teacher nominations were performed in each classroom, using the form used in the Dadds et al. (1997) study. Teachers were given descriptions of very anxious and disruptive behavior and nominated a maximum of three students who
displayed the most anxiety and a maximum of three students who displayed the most disruptive behavior in their class.

*Preventive Intervention*

FRIENDS is a group-oriented cognitive-behavioral program that teaches children strategies for coping with anxiety. It is a revision of the Coping Koala anxiety intervention program (Barrett, Lowry-Webster, & Holmes, 1998). There are three primary processes that interact in the development and maintenance of anxiety symptoms and disorders that are addressed by the FRIENDS prevention intervention: Behavioral, physiological and cognitive (Barrett et al., 1999). The behavioral domain pertains to coping with and managing anxiety. Skills targeted at this domain include problem-solving, exposure to irrational fears in a graduated fashion, and rewards to encourage youth to approach challenging situations. The physiological component relates to the somatic or physical reactions experienced when feeling nervous, worried or afraid. The FRIENDS program increases children’s awareness of their physiological symptoms and their link to stress and anxiety (a connection rarely made by anxious youth) and teaches them relaxation skills (Barrett et al., 1999; Kendall, Chansky, Kane, Kin, Kortlander, Ronan, Sessa, & Siqueland, 1992). The cognitive domain involves self-talk or internal dialogue regarding self, others, and situations (Treadwell & Kendall, 1996).

Cognitive-behavioral theory endorses the principle that one’s thoughts influence feelings and, subsequently, behaviors. FRIENDS includes positive self-talk because anxious youth engage in negative or unrealistic attributions (Kendall et al., 1992) and self-rewards to teach children to set more positive and realistic self-evaluations and reward themselves for partial successes (Barrett et al., 1999; Kendall et al., 1992). Addressing these three domains represents a comprehensive approach to the conceptualization of child anxiety disorders and their intervention. FRIENDS is an acronym for: F - Feeling worried; R - Relax and feel good; I - Inner thoughts; E - Explore plans; N - Nice work, so reward yourself; D - Don’t forget to practice; S - Stay cool. The FRIENDS program was conducted by a group leader (a licensed psychologist) and coleader (postdoctoral fellow). Both held doctorates in child clinical psychology. Process notes were kept by the group leaders following each intervention session detailing the students’ interest and comprehension as well as the relevance of the session material to their culture and context. For example, a session teaches relaxation strategies to students by having them imagine they are animals indigenous to Australia. One exercise involves kangaroos riding in their mothers’ pouches. The kangaroos have to tuck themselves into tight balls to hide from a farmer who has a gun pointed at them. The kangaroos are instructed subsequently to relax and stretch once the threat of harm has subsided. One of the students questioned why the farmer would be shooting the kangaroos. The session processed this issue and focused on developing skills to use when one is faced with the threat of gun violence.
RESULTS

Community Violence

Participants completed the CREV to assess their lifetime and past year exposure to community violence. The average lifetime exposure score was 41.7 (SD = 25.2), while the mean of the past year exposure score was 39.3 (SD = 24.4) with a range of scores from 11 to 83. Compared to the CREV normative sample reported by Cooley et al. (1995) that included primarily African-American youth, the mean lifetime score reflects moderate levels of community violence exposure. Cooley et al.’s mean score for 9–12 year old children was 35.4 (SD = 16.0). Further evidence of the children’s exposure to community violence is reflected in the content of their fears, which were reported during the ADIS-C interview. Half of the students were diagnosed with Separation Anxiety Disorder (SAD). The children reported that they worried about their mothers’ safety, fearing that their mothers would be kidnapped, robbed, hurt, or involved in an accident. Regular fears concerning their own safety included kidnapping, rape, and strangulation, and one student reported being worried about having been approached to assist in shooting someone.

FRIENDS Preventive Intervention

Preventive Intervention Methods

The FRIENDS anxiety prevention program manual was followed with a few modifications. Examples follow. First, the pilot study intervention consisted of 11 biweekly 1-hour sessions held during regular school hours. The biweekly sessions deviated from the FRIENDS manual that recommends 10 weekly sessions, but were necessary because of the limited amount of time remaining in the school year. Second, the FRIENDS parent program (i.e., three sessions) was not implemented due to resource limitations. Third, several of the FRIENDS program’s written tasks were conducted out loud (e.g., children would take turns reading their responses without having written them in their workbooks) because reading and writing were difficult and very time-consuming for several of the participants, a reflection of their learning disabilities. Because of the variability in the children’s reading comprehension, language was simplified as needed (e.g., group leaders conducted quasiquizzes prior to initiating some of the tasks to assess the reading level). Fourth, minor modifications of terms specific to Australian culture were translated and/or replaced. All language modifications were made from Australian English to American English. For example, “vegemite” was replaced with peanut butter, “sugar glider possum” was replaced with bat, and “tucker” was explained as food.
Session attendance rates for the students were maintained. Attendance at regular group sessions ranged from seven to 11 sessions with an average attendance of 9.8 (SD = 1.32) out of a possible 11 sessions. Make-up sessions were conducted prior to the next session for children who missed the FRIENDS group sessions. With the inclusion of make-up sessions, the intervention dosage was very high ($M = 10.9$, $SD = 0.32$). Only one of the ten children missed a session without a make-up, and it was the introductory session. Sixteen homework assignments were made during the program. Homework completion ranged from three to 16 with a mean of 11.3 (SD = 4.32) completions of the 16 assignments.

**Intervention Effects**

To examine intervention effects, correlated $t$-tests and nonparametric analyses were conducted comparing students before and after the intervention. $T$-tests were performed for continuous outcome measures, such as self-report measures and clinical ratings. Figure 1 contains the mean scores and standard deviations of the self-report measures administered at pre- and postintervention. Results showed that the students’ preintervention anxiety, as indicated by the RCMAS, significantly decreased after the intervention ($t = 6.84$, $p < .001$). Specifically, significant declines were evident in the children’s report of physiological symptoms of anxiety ($t = 6.50$, $p < .001$), worry and oversensitivity to environmental pressures ($t = 4.07$, $p < .005$), and anxiety associated with social expectations and concentration difficulties ($t = 2.95$, $p < .05$). In addition, students reported significantly less test anxiety on the TASC after the intervention ($t = 3.58$, $p < .01$). There was a statistical trend suggesting a decline in the clinical severity of anxiety at postintervention using the eight-point ADIS-C clinical severity rating scale ($t = 2.03$, $p < .10$). There was no evidence of change in depressive symptoms (CDI), total anxiety as measured by the MASC, or social skills (SSRS) from pre- to postintervention ($p’s > .10$).

The McNemar test was performed for the dichotomous variable occurrence of an anxiety disorder before and after intervention. There were no significant pre-post intervention differences ($p > .10$). However, the three children who did not have a DSM-IV anxiety diagnosis prior to the intervention remained free of a diagnosis. Seven children had anxiety diagnoses before the intervention, but three (42.9%) of them no longer met criteria for a diagnosis at post-treatment.

Using a rating scale from 0 (not at all) to 8 (very, very much), participants were asked to rate the FRIENDS group on two variables. Children rated the likeability of the FRIENDS program and the degree to which the program changed their general behavior in school. The children highly rated the likeability of the program ($M = 7.8$, $SD = 0.63$). School behavior change ratings were moderate ($M = 4.9$, $SD = 2.88$).
Fig. 1. Pre- vs. postintervention raw score differences among self-report instruments. Note: 1 = Revised Children’s Manifest Anxiety Scale: Total score (preintervention raw score = 19.8, SD = 3.08; postintervention raw score = 10.8, SD = 3.43); 2 = Revised Children’s Manifest Anxiety Scale: Physiological symptoms scale (preintervention raw score = 7.4; SD = 1.35; postintervention raw score = 3.2; SD = 1.03); 3 = Revised Children’s Manifest Anxiety Scale: Worry/hypersensitivity scale (preintervention raw score = 8.5; SD = 2.32; post-intervention raw score = 5.3; SD = 2.16); 4 = Revised Children’s Manifest Anxiety Scale: Social concerns/Concentration problems scale (preintervention raw score = 4.1; SD = 1.10; postintervention raw score = 2.3; SD = 1.34); 5 = Multidimensional Anxiety Scale for Children: Total anxiety score (preintervention raw score = 54.4; SD = 14.10; postintervention raw score = 51.8; SD = 18.13); 6 = Social Skills Rating System (preintervention raw score = 61.3; SD = 11.85; postintervention raw score = 58.3; SD = 8.75); 7 = Test Anxiety Scale for Children (preintervention raw score = 14.6; SD = 6.11; post-intervention raw score = 10.0; SD = 6.11); 8 = Children’s Depression Inventory (preintervention raw score = 7.9; SD = 5.47; post-intervention raw score = 6.6; SD = 8.22).

DISCUSSION

With the prevalence of anxiety disorders in children and its suspected long-standing consequences into adulthood, effective prevention and early intervention efforts are needed for children suffering from anxious symptomatology. Only relatively recently has a preventive approach been applied to school and community samples of anxious youth (Dadds et al., 1997). The need for prevention and control is particularly critical in inner-cities where mental health resources are sparse, despite the demonstrated lessened effect of traumatic events when youth have the opportunity to process them (Pynoos & Nader, 1990). Farrell, Meyer,
Kung and Sullivan (2001) further elucidate this importance by recommending that school-based selective prevention programs are developed for students who live in impoverished neighborhoods with high rates of community violence. Responding to this need, the authors took advantage of an existing, efficacious anxiety prevention program (FRIENDS; Barrett et al., 1998) and applied it to a group of anxious elementary school children who have been exposed to at least moderate levels of community violence. Although anxiety may serve as an adaptive emotion that is necessary for survival particularly in dangerous environments, the children in this study exhibited higher than average levels of anxiety that impaired their functioning and placed them at-risk for future dysfunction. Although the theoretical foundation of the program remains the same regardless of the children involved, it is important to identify factors that would make the program appropriate for a population that was culturally and contextually different from the youth for whom the FRIENDS program was developed. The latter issue is addressed in this paper because of the demonstrated importance of sociocultural variables in the treatment of anxiety disorders (Fink, Turner, & Beidel, 1996). The primary question of interest was whether the FRIENDS program was feasible to use with students living in a violent neighborhood who were exposed to community violence. Resource limitations prohibited the authors from conducting a major efficacy trial, however, it was methodologically sensible to take a stepwise approach utilizing the preventive intervention research cycle (i.e., evaluating the feasibility of the program, making requisite modifications, later implementing an efficacy trial, followed by a large scale effectiveness trial; Mrazek & Haggerty, 1994).

One public elementary school was chosen to conduct this feasibility study. It was located in an urban district with the highest per capita crime rate of all the districts of the city, thus maximizing the likelihood that its students would be exposed to community violence and have limited resources. The fifth grade was selected because these students would graduate from elementary school and not “contaminate” the randomization process for the efficacy study that was planned. The results of this study indicate that the FRIENDS anxiety preventive intervention is feasible for use with an inner-city African-American school sample, with few modifications.

Biweekly sessions were held over five weeks which deviated from the FRIENDS manual that recommends ten weekly sessions. The increased intensity did not have an adverse effect and the proximity of the sessions may have helped the students stay invested in the program. The disadvantages, however, were that there was less time between sessions for the students to complete their FRIENDS behavioral homework and that some educational instruction was disrupted given that students were removed from class so frequently. Second, the FRIENDS parent program (i.e., three sessions) was not implemented due to resource limitations. Third, several of the FRIENDS program’s written tasks were conducted out loud (e.g., children would take turns reading their responses without
having written them in their workbooks) because reading and writing were difficult and very time-consuming for several of the participants, a reflection of their learning disabilities and/or low reading comprehension skills. The advantages of reading aloud were that the children could be more interactive in the group process and assured the leaders that the students understood the targeted strategies and tasks. The disadvantages were that writing serves as another form of reinforcement of the concepts and the students did not have a written record of their responses if they wanted to review their work at a later point. Increasing the number of sessions would permit more comprehensive coverage of the material given that some of the students had difficulty understanding some of the complex concepts, in addition to the reading and writing.

The fourth modification of the FRIENDS program was that American English translations were made for words or examples in the FRIENDS workbooks that were idiosyncratic to Australian culture. For example, “Bluey the Cattledog” and mountain climbing were understood, but not relevant to the urban children’s environment. It is recommended that examples involving experiences contextually relevant to inner-city children are incorporated into the sessions, including their fears (e.g., death, kidnapping) and challenges (e.g., fights, limited resources). Future iterations may also adapt to the African-American culture by using names, pictures and situations commonly heard or known in the African-American community as examples in the FRIENDS workbook. For example, for some, “family” has a different connotation from traditional two-parent homes. Several children lived with grandparents or single-mothers. This had to be kept in mind, even from the first FRIENDS session, when the children were asked, “How many people are in your family?” Because of the inclusive nature of African-American’s concept of family, the question was changed to, “How many people live with you?” The multigenerational caregiving and extended family that is a critical aspect of African-American culture possibly serves a protective function and provides social support that may buffer the effects of community violence. Conversely, the extended family unit may increase a child’s likelihood of knowing someone who has been victimized by violence, which may increase their vulnerability or risk for the adverse effects of community violence exposure.

The primary focus of this study was on the feasibility of using the FRIENDS anxiety preventive intervention in an inner-city African-American sample. Thus, a very small sample size was involved. It was believed that power limitations would prohibit statistical analyses of the data. However, the preventive intervention effects were robust and statistical significance was obtained when pre- to postintervention analyses were conducted. For example, the fifth graders’ self-reported anxiety decreased and statistical trends suggested a decline in clinical anxiety severity. Importantly, significant decreases were found in manifestations of anxiety that were contextually relevant to the community violence exposed youth. These include: Physiological symptoms (a targeted component of the FRIENDS program); worry
and hypersensitivity regarding environmental pressures (a salient ecological risk associated with living in violent communities); and concentration difficulties (that previous research has attributed to distracting and intrusive thoughts regarding violent events; Taylor et al., 1997). Academic problems have been also linked to youth who grow up in violent and/or impoverished environments (e.g., Gibbs, 1984; Myers et al., 1992). There were significant intervention effects in decreasing test anxiety, which may help the youth perform better academically although no formal academic performance assessment was made in this study. Students indicated that participating in the FRIENDS program had moderate effects on their school behavior.

There were no significant differences when comparing depressive symptoms or social skills prior to and following the intervention; neither was a target of the FRIENDS anxiety preventive intervention. Although there were no significant intervention differences in the occurrence of an anxiety disorder, six of the children did not have an anxiety disorder following the intervention compared to only three before the intervention was conducted. Most of the previous anxiety preventive interventions did not show immediate (i.e., post-) intervention effects; compared to controls, the effects were delayed until six to twenty-four months after the intervention ended (Dadds et al., 1997). As such, it is promising that the FRIENDS anxiety preventive intervention demonstrated potential effects on clinical diagnoses within a five-week period. Follow-up studies are needed to determine the long-term effect of the FRIENDS program on preventing anxiety disorders. Alternatively, universal interventions that focus on improving the quality of neighborhoods and increasing safety are potentially critical in preventing anxiety by remedying environments that exacerbate anxious and negative feelings and symptoms. Importantly, the children highly rated the likeability the FRIENDS program that will assist in gaining high participation and completion rates. It also may help in destigmatizing the mental health intervention. It should be noted that inquiring about the likeability of the FRIENDS program may be a function of demand characteristics, however the students frequently expressed their enthusiasm for the program not only on the self-report postintervention but also in their spontaneous descriptions of their experiences throughout the program.

This feasibility study has several limitations. For example, using passive parental consent and active child assent resulted in 89% of the children participating in the initial screening. Combined with teacher nominations, almost half of those students \((n = 37)\) qualified for further assessment. However, as is often a problem with community-based research, active parental consent was difficult to obtain. It was received for only thirty percent of the eligible students, thereby affects the generalizability of the results. This low response rate was obtained by mailing consent forms to parents/caregivers. If a response was not obtained from the first mailing, a second attempt was made. However, because the goal was to conduct one FRIENDS group (of a maximum of ten students), no other methods were
used to contact parents/caregivers. Clearly, future studies will have to involve very active and diverse approaches to gain optimal parental consent rates. Aggressive recruitment will also be crucial for conducting parent intervention sessions, which, in clinical samples, make the CBT interventions more effective than without the family component (e.g., Barrett et al., 1996).

Another limitation of this study was that it lacked a control group. The students served as their own controls such that pre-post intervention scores were compared. However, a more stringent test would be to randomly compare the intervention group to a nonintervention control group, or better yet, another intervention. Because of this study’s sample size and no comparison group, caution needs to be taken in concluding that the decreases in symptoms are a result of the intervention. Additionally, the omission of the parent component may limit the maintenance and generalizability of the skills obtained by the participants because they are not likely to be reinforced in the children’s home environment. The study also is limited by not having follow-up data on the participants. Kendall and Southam-Gerow (1996) tracked their clinical sample for three and one-half years. These maintenance data are important for judging the long-term efficacy of the intervention. The findings of this pilot study cannot be generalized to all students in the school in which it was conducted, nor to all African-American or inner-city children. Despite the limitations of this study, the data support the feasibility of using the FRIENDS preventive intervention with anxious inner-city children exposed to moderate levels of community violence. This pilot study helped elucidate the modifications that should be made to the program to make it culturally and contextually appropriate for these at-risk youth, preparing the path for a preventive intervention efficacy trial.

ACKNOWLEDGMENTS

The authors thank the faculty, staff and students of the elementary school at which this study was conducted for their assistance and participation in the research project. This work is supported in part by two National Institute of Mental Health grants: 1) Mentored Scientist Development (K01) Award (Community Violence: Prevention & Youth’s Mental Health, Grant 1 K01 MH01661-03, PI: M. Cooley-Quille), and 2) Pilot Effectiveness Trial for Mental Disorders (R21) Grant (Community Violence & Youth: Preventing Anxiety Disorders, 1 R21 MH 63143, PI: M. Cooley-Quille).

REFERENCES


