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Urban African American youth exposed to community violence:

A school-based anxiety preventive intervention efficacy study

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#### Abstract

This study evaluated the efficacy of a school-based anxiety prevention program among urban children exposed to community violence. Students who attended Title 1 public elementary schools were screened. Ninety-eight 3-5<sup>th</sup> grade students (ages 8-12; 48% female; 92% African American) were randomized into preventive intervention versus wait-list comparison groups. Students attended 13 bi-weekly one-hour group sessions of a modified version of FRIENDS, a cognitive-behavioral anxiety intervention program. Results indicated that both intervention and control groups manifested significant reductions in anxiety symptomatology and total exposure to community violence, along with improved standardized reading achievement scores. Additional gains observed only in the intervention group were increased standardized mathematics achievement scores, decreased life stressors, and reduced victimization by community violence. The intervention was equally efficacious for both genders and for children exposed to higher, compared to lower, levels of community violence. Implications for comprehensive, culturally and contextually relevant prevention programs and research are discussed.

**KEY WORDS:** community violence, children and youth, ethnic minority, African American, prevention, anxiety, school-based interventions

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This research was supported by grants from the National Institute of Mental Health (PI: Cooley; R21 MH63143) and the National Institute on Drug Abuse (PI: Cooley; R01 DA018318).

We extend our gratitude to the Baltimore City Public School System and the principals, teachers, parents, caregivers, and students who participated in the FRIENDS Program.

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A School-based Anxiety Preventive Intervention Study

Community violence in schools, neighborhoods, and communities is a major public health problem (WHO, 2002). Children's exposure by hearing about, witnessing, and/or experiencing it reached critical levels decades ago and there it remains. The effects of exposure to community violence may profoundly affect children's development in multiple domains from early childhood into adolescence and beyond (Cooley-Strickland, Quille, Griffin, Bradshaw, & Furr-Holden, 2009). For example, studies have found a positive association between community violence exposure and anxiety (Cooley-Quille, Boyd, Frantz, & Walsch, 2001; Ward, Martin, Theron & Distiller, 2007) and that anxiety interferes with children's ability to concentrate, thus potentially disrupting their academic performance (Birmaher, Bridge, Williamson, Brent, Dahl, et al., 2004). It has been recommended that developmentally appropriate interventions for children exposed to community violence are implemented early and are evaluated for their effectiveness (Berkowitz, 2003). This paper reports on the effects of a secondary preventive intervention program to investigate its impact on community violence, anxiety, and related functioning (academic achievement, life stressors) among urban ethnic minority school children.

Community violence affects all racial and ethnic groups, but African Americans living in low-income urban neighborhoods experience higher rates of community violence and crime than urban European Americans (Crouch, Hanson, Saunders, Kilpatrick, & Resnick, 2000). Exposure to violence among African American youth does not decrease with higher socio-economic status, as it does for European Americans (Crouch et al., 2000). Constant worry about one's own or loved ones' safety or health likely interferes with low income, urban children's ability to function in developmentally appropriate, academically successful, and healthy ways (Cooley-

Quille, Boyd, & Grados, 2004) and may be a source of anxiety and oppositional-aggressive behavior as an attempt to exert control in chaotic environments (Ford, 2002). Low income, urban youth have elevated anxiety disorder symptoms (Rathus, Wetzler, & Asnis, 1995). Those living in perpetually violent communities may be in a constant state of defense, potentially at risk for developing anxiety symptoms as a result of a neurological structure that is ready to deal with external threats at any time (Edlynn, Gaylord-Harden, Richards & Miller, 2008). This is consistent with the concept of Allostatic load identified by McEwen (2000) as referring to the physiological costs of chronic exposure to the neural stress response.

Anxiety disorders in childhood and adolescence are serious mental health problems (Barrett & Turner, 2001) which occur at disturbingly high rates (Barrett, Farrell, Ollendick & Dadds, 2006). They are the most frequently experienced mental health disorder among children and adolescents and are experienced by about 13 out of every 100 children from ages 9 to 17 years, with approximately half of them suffering from an additional mental health disorder (DHHS, 1999). Left untreated, children with anxiety disorders are at significant risk for developing other psychological disorders (e.g., Cole, Peeke, Martin, Truglio & Seroczynski, 1998; Last, Hansen, & Franco, 1997) as well as problems such as poor social skills, low self esteem, and substance abuse (DHHS, 1999). Anxiety symptoms and disorders in childhood may interfere with children's long-term academic functioning, as those affected by an anxiety disorder are significantly less likely to be in school or working in young adulthood (Last, Hanson & Franco, 1997). African Americans are less likely than European Americans to receive appropriate treatment for anxiety problems (Young, Klap, Sherbourne, & Wells, 2001).

School-based treatment and preventive interventions are needed for youth exposed to chronic community violence (Cooley-Strickland et al., 2009). A review of them was conducted

by Cooley and Lambert (2006). Providing interventions in schools improves attendance at sessions, reduces stigma associated with therapy (Stallard, Simpson, Anderson, Hibbert & Osborn, 2007), and delivers the services in communities where resources may be sparse. There are well-evaluated school-based intervention programs designed to treat anxiety (Stallard, Simpson, Anderson, Hibbert & Osborn, 2007). Studies have demonstrated that cognitive-behavioral treatment (CBT) is effective for reducing childhood anxiety (Barrett, Duffy, Dadds & Rapee, 2001; Kendall, 1994) and group-based CBT has proven to be effective for treating childhood anxiety (e.g., Shortt, Barrett & Fox, 2001). Although there is very little research on CBT with diverse populations (Bryant & Harder, 2008) it has proven to be effective for Latino/Hispanic (Kataoka, Stein, Jaycox, Wong, et al., 2003) and African American students in school-based settings (Ginsburg & Drake, 2002). Yet to be tested in a randomized control study is a group CBT anxiety preventive intervention program with urban African American children exposed to community violence.

FRIENDS (Barrett, Webster, & Turner, 2000) is a group CBT program designed originally as a treatment program for Australian children with anxiety disorders. It has been established as a successful school-based group anxiety prevention program in Australia (Barrett & Turner, 2001; Lowry-Webster, Barrett, & Dadds, 2001) and in the U.S. with majority students (i.e., 97% European American; Bernstein, Layne, Egan, & Tennison, 2005). FRIENDS uses the core CBT components (exposure, relaxation, cognitive strategies, contingency management) and targets the primary components of anxiety (physiological, cognitive, behavioral). A distinctive element of the current project is that it applies this effective intervention to underserved ethnic minority youth who live in neighborhoods with low resources and high levels of external threats.

The aim of the current study was to reduce the symptoms and prevent the onset of severe

anxiety disorders among African American children exposed to community violence who attend urban public elementary schools. The primary hypothesis was that compared to the non-intervention comparison youth, participants in the modified FRIENDS program would have fewer anxiety symptoms at post-intervention. It was also expected that FRIENDS would be equally efficacious for males and females, and for children exposed to high and low levels of community violence. Secondly, it was expected that children in the intervention group would experience less community violence exposure and related adverse life events as a result of improved cognitive, physiological, and behavioral skills. Relatedly, it was expected that academic achievement may improve for intervention participants.

## Method

### *Participants*

Participants (n=93) were African American (92%) and biracial (8%) students 8 to 12 years old (grades 3-5; 48% female), in two Title 1 public elementary schools located in Baltimore, MD. Both schools were located in economically disadvantaged urban communities (average of 90% of the student bodies received free or reduced lunch) characterized by high crime.

### *Intervention*

FRIENDS (Barrett & Turner, 2001; Barrett, Webster, & Turner, 2000) is a group oriented CBT selected anxiety prevention program that targets students with mild to moderate anxiety disorders. The cognitive, physiological, and behavioral components of the FRIENDS Program teach children specific strategies for coping with anxiety, including problem-solving skills and skills to cope with fearful stimuli. During the sessions didactic lessons were taught by the group leaders, then students participated in activities and role-plays to practice the new skills. Students were given weekly homework assignments to help generalize the skills they learned to the

classroom and home environments. Examples of session content include: identifying physiological symptoms of anxiety (e.g., students were taught to identify emotions and body cues), learning relaxation techniques (e.g., deep breathing and visualization), and engaging in positive feelings, thoughts, and self-talk as they actively face challenges and fears.

FRIENDS is an acronym for the skills it teaches, which stands 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; and S- Stay calm, you know how to cope now (Shortt, Barrett & Fox, 2001). The current preventive intervention program was based on the FRIENDS Program, albeit modified to be culturally and contextually appropriate for ethnically diverse urban American children, particularly African Americans. The guiding principle of this adaptation was to limit changes to shallow structure modifications that facilitated the students being able to comprehend and relate to the program content, while striving to maintain the therapeutic integrity of the cognitive-behavioral intervention. For example, the relaxation exercises were modified from animals that were indigenous to Australia (e.g., koalas, bilbys, cattle dogs, crocodiles) to those found in urban America (e.g., pigeons, mice, dogs, kittens); CD's were made of the relaxation exercises for the students to take home and practice. Children drew pictures of real-life violence that had occurred in their communities that they had either heard about happening, witnessed, or had personally been victimized by. Other opportunities to relate incidents and anxiety associated with living in violent and chaotic environments (e.g., fights, gangs, drugs, low resources) were integrated into the sessions; further cultural and contextual modifications for the intervention may be found in Cooley-Quille et al. (2004).

Under the supervision of a licensed psychologist (the first author), the group leaders and co-leaders received training and supervision in the FRIENDS preventive intervention (e.g.,

review of the intervention curriculum and materials, role-plays, practice sessions). The FRIENDS Program consisted of 13 biweekly, one-hour sessions led by a doctoral level African American group leader and African American or European American co-leader with at least a bachelor's degree. Sessions were implemented as a pull-out program during the school day in small groups of 8-10 students. Make-up sessions were held for children who missed their regular session. Including the make-ups, all participants attended at least 12 of the 13 sessions.

Because family factors are commonly associated with the development and maintenance of childhood anxiety (Barrett, 1998) and family involvement in treatment helps reduce anxiety in children (Bernstein et al., 2005), the current project planned 3 one-hour parent sessions using the FRIENDS parent manual. The sessions were based on CBT, reviewed child management skills, skills the children were acquiring in the FRIENDS program, and how to encourage them in their children to promote generalizability to the home and larger community. Instead, a single expanded parent session was held; fewer than half of the families attended.

### *Measures*

*Exposure to community violence* was assessed using the Children's Report of Exposure to Violence (CREV; Cooley, Turner, & Beidel, 1995). The CREV is a widely used self-report questionnaire developed to assess children's lifetime exposure to community violence. It has good two-week test-retest reliability ( $r=.75$ ), internal consistency (overall  $\alpha = .78$ ), and construct validity (Cooley et al., 1995). Twenty-nine scored CREV items are rated on a 5-point Likert scale, ranging from 0 – "no, never" to 4 – "everyday," to indicate the frequency of exposure to community violence via four modes (i.e., media, hearsay, witness, victimization). Types of violent situations include being chased or threatened, beaten up, robbed or mugged, shot, stabbed, or killed. Higher scores indicate more perceived exposure. A past-year version of the

CREV was developed and administered at the post-assessment evaluation. Cronbach's  $\alpha$  for the lifetime CREV Total score was .88 at baseline and .90 for the past-year version.

*Mental health* was assessed using the Computerized Diagnostic Interview Schedule for Children. It is a comprehensive, structured interview that covers mental health disorders for children and adolescents using DSM-IV criteria (Shaffer, Fisher, Lucas, Dulcan, & Schwab-Stone, 2000). Eighteen modules were administered at baseline, including the anxiety, depression, attention/hyperactivity, and conduct modules. Eight anxiety modules were administered during the post assessment. The C-DISC has demonstrated excellent interrater reliability with 97% of clinicians agreeing with the C-DISC's diagnosis (Wolfe, Toro & McCaskill, 1999).

*Anxiety symptomatology* was assessed using the Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1997), a self-report measure of the level and nature of anxiety in children and adolescents. It is a 37 item questionnaire in which students agree or disagree to statements pertaining to how some people think or feel about themselves, assessing different ways anxiety is manifested. A higher score indicates more anxiety and distress. The RCMAS has good internal consistency ( $\alpha=0.83$ ) and test-retest reliability ( $r=0.68$ ). In the FRIENDS study, Total RCMAS reliability was  $\alpha=.83$  at baseline and  $\alpha=.84$  at post-assessment.

*Academic achievement* was assessed using the Wechsler Individual Achievement Test-Screener (WIAT Screener; Psychological Corporation, 1992) which consists of 3 subtests of the comprehensive WIAT battery (i.e., Basic Reading, Mathematics Reasoning, Spelling). It assesses basic academic skills; permits the calculation of age- and grade-based standard scores; was standardized using a large representative sample; is widely used; and has demonstrated reliability and validity with little evidence of practice effects (Psychological Corporation, 1992).

*Adverse life events* were assessed using the Multicultural Events Schedule for

Adolescents (MESA; Gonzales, Gunnoe, Samaniego & Jackson, 1995), developed to assess major and minor life events specific to an urban multi-ethnic population (Gonzales et al., 1995). It was normed on African American, European American, and English- and Spanish speaking Mexican Americans. The MESA includes 84 items in which a student responds yes or no to each life events over the past year. A Total life events score is based on the number of events endorsed, with a higher score indicating more adverse life events and hassles. The MESA has adequate concurrent validity and test-retest reliability (Gonzales et al., 1995). In the FRIENDS project, the MESA Total score  $\alpha = .89$  at baseline, and  $\alpha = .95$  at the post-assessment.

### *Procedure*

*Baseline screening and selection of participants.* A two-stage screening process identified children for participation in the FRIENDS Program. First, parents/guardians of students in the third through fifth grades in regular education or resource classes at the two urban public elementary schools were mailed letters of notification informing them of the RCMAS (Reynolds & Richmond, 1978) and CREV (Cooley et al., 1995) administration at their child's school with an option to decline participation. Children who assented and whose parents/caregivers provided permission were administered the RCMAS and CREV in groups by classroom (12 classes in two schools; 330 (82%) students were assessed out of 404 in the combined student body). Teachers in each classroom ( $n=16$ ) nominated up to 3 very anxious students, following Dadds et al. (1997) procedure, resulting in 34 students who were automatically considered for the next level of eligibility in the project. Consistent with other school based interventions (e.g., Stein, Jaycox, Kataoka, Wong, Tu, et al., 2003), teachers were also asked to identify up to three children in their classrooms who were *extremely* disruptive or aggressive and therefore would not be appropriate for group sessions. Those 51 students were eliminated from the project although their

exclusion did not eliminate all anxious children with co-occurring aggressive behavior from the FRIENDS program. Children were *included* and eligible for further consideration for the FRIENDS program if they: 1) had a CREV Total score > 10; and 2) either a RCMAS T-score of 51 or higher or were included in the teachers' nominations of anxious children. They were *excluded* if they were not in regular education or resource classes or had been nominated by teachers as extremely disruptive.

In the second stage of screening, parents of the 207 eligible students were asked to provide written consent for their child to participate in a comprehensive anxiety assessment battery at school for urban children exposed to community violence, as well as permit their child to be randomized to an anxiety prevention program or wait-list control condition, treated (including parent participation in sessions), and participate in the post-assessment evaluation, if the child was found eligible to participate. Of those contacted, parental consent was provided by 122 (58.9%) of them; their children were administered a comprehensive, multi-method assessment battery including the: WIAT Screener, MESA, and C-DISC. Assessments were conducted by trained research assistants in empty classrooms for the 90 minute battery. Incentives to encourage participation were given to teachers (e.g., class pizza party for classrooms with 80% or higher response rates), parents (e.g., \$40 lottery), and students (e.g., dictionaries, pencils).

*Final selection and randomization.* Parents were given feedback about their child's status. Eligible children who were considered "at-risk" for anxiety disorders and who endorsed at least mild exposure to community violence were invited to participate in the FRIENDS selected prevention program to be randomized to preventive intervention or wait-list control conditions. To be considered "at-risk," the child had to have a mild to moderate DSM-IV anxiety diagnosis or features/symptoms of an anxiety disorder. Twenty-six students were excluded from the project

for: currently receiving mental health treatment for an anxiety disorder; a threshold level DSM-IV disruptive behavioral disorder (i.e., ADHD, Conduct Disorder, Oppositional Defiant Disorder); too few anxiety symptoms; or a severe anxiety disorder. Those students were not randomized to conditions and were excluded from the study; parents were offered referrals for child mental health services if needed and/or desired. Children who assented following their parents' consent (n=93) were randomly assigned to the intervention or wait-list comparison group. Post-intervention assessments were conducted at the end of the FRIENDS program.

### Results

Comparison of the intervention (n = 48) and wait-list control (n = 45) groups using Chi-square and ANOVA tests revealed no significant differences in demographic characteristics, academic performance, community violence, anxiety, or adverse life events (Table 1;  $p$ 's > 0.05). In comparing the two Title 1 schools from which the participants were recruited, there were no significant differences (Chi-square and ANOVA tests;  $p$ 's > 0.05) between them on age of the participants or any of the academic performance or psychosocial measures. The two schools differed on ethnic composition (Chi-square (df) = 14.88(1);  $p$  < 0.01) such that the program participants from one school were 97.7% African American and 2.3% biracial (22.9% of the neighborhood residents lived below the poverty level), whereas the other were 75.8% African American and 24.2% biracial (8.6% of neighborhood residents lived below poverty).

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Insert Table 1 About Here

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#### *Within-group comparisons*

Paired  $t$ -tests were used to investigate within-group changes on community violence exposure, academic performance, and psychosocial outcomes (Table 2). **Both groups showed**

significant reductions in their Total exposure to community violence at post-intervention compared to baseline (Table 2;  $p$ 's < 0.01). The intervention group also experienced a mean reduction in community violence victimization; the control group did not ( $p > 0.05$ ). Significant reductions in overall anxiety, as measured by total RCMAS score, were observed in both groups at post-intervention from baseline ( $p$ 's < 0.01). Reading performance significantly improved from baseline to post-intervention in both groups (WIAT Reading age equivalent;  $p$ 's < 0.05). The FRIENDS intervention group's mathematics performance score also significantly improved, although the control group's did not. The intervention group was performing mathematical skills at the mean equivalent of a 9.6 year-old (SD = 1.9) at baseline, and the equivalent of a 10 year old (SD = 1.8) at post-intervention ( $p < 0.01$ ). The intervention, but not control, group had significant reductions in adverse life events, as measured by the Total MESA score ( $p < 0.01$ ).

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Insert Table 2 About Here

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#### *Between-group comparisons*

A two-group repeated measures MANOVA, controlling for baseline measures, was conducted to investigate the differences across baseline and post-intervention for the FRIENDS intervention versus control group. The two groups did not significantly differ on the major variables of interest (CREV, RCMAS, WIAT, MASC, behavior change, program likeability; no group by time interactions were found;  $p$ 's > 0.05; data not shown). A time effect was observed, as the entire sample had lower levels of anxiety (RCMAS;  $F(1,71) = 10.139$ ;  $p < 0.01$ ) and improved scores on age-based WIAT Reading performance ( $F(1,70) = 5.26$ ;  $p < 0.05$ ).

#### *Gender differences at post-intervention*

A 2x2 Factorial ANOVA controlling for baseline measurements was conducted to

investigate whether the FRIENDS intervention was equally efficacious for male (n=24) and female (n=24) participants. There were no significant main effects for intervention status on any of the measures of interest ( $p$ 's > 0.05; data not shown).

*Post-intervention differences for high and low exposure to community violence*

A two-groups repeated measures MANOVA, controlling for baseline measures, was conducted to investigate whether the FRIENDS intervention was equally efficacious for individuals who reported high and low exposure to community violence at baseline. The median CREV score at baseline was used to classify high and low community violence exposure (CVE) groups. As expected, the two exposure groups did not differ significantly on academic performance or measures of anxiety ( $p$ 's > 0.05; data not shown).

### Discussion

Anxiety disorders are based in part on unrealistic appraisals of threat. However, children who have been exposed to high levels of chronic community violence may face danger that is not unrealistic – such as threats of physical harm or safety – that may adversely affect their physiological and cognitive well-being. Participants in the FRIENDS program gave many examples of the real-life dangers they faced as residents in violent communities. Research on assessing youth's threat appraisals in response to community violence has recently been published (Kliewer & Sullivan, 2008) based on the recognized need of accurately understanding the unique threats posed by this form of life stressor. Questions arise such as: When are fears, worries, and apprehension among youth exposed to community violence psycho-pathological? Are the fears protective? At what point should anxiety be targeted for intervention? Ideally, economic and environmental changes at the community level would occur that removed the threats to urban children like poverty, guns, street drugs, and gangs. Until then, intervening at the

individual, school, and family levels may benefit youth, including targeting unhealthy levels of distress and anxiety. Certain levels of anxiety protect against African American youth's exposure to community violence (Boyd, Cooley, Lambert, & Ialongo, 2003; Lambert, Ialongo, Boyd, & Cooley, 2005), although studies of the "optimal" level among this population are warranted.

Anxiety can negatively influence cognitive as well as social development (Cooley-Quille, Boyd, Frantz, & Walsch, 2001). The FRIENDS Program did not specifically target academic skills but its participants exhibited improved standardized reading and mathematics achievement scores whereas the control children only showed improved reading. Perhaps math skills improved as a result of the intervention's focus on problem-solving and other cognitive components, although this study was not designed to identify which specific elements caused which intervention effects. Regardless, there were notable developmental benefits of the intervention, particularly given substantial pressure on students and schools to perform at least at grade level because of local, state, and national performance-based initiatives.

Controlling for baseline scores, children who participated in the FRIENDS intervention group showed reduced levels of victimization of community violence and fewer life stressors, whereas the control group did not. Perhaps this is related to the skills taught in the intervention and emphasis on strategies for coping with anxiety (e.g., relaxation techniques, engaging in positive feelings, thoughts, and self-talk as they actively face challenges and fears). Additionally, students in the intervention group were taught to attend to perceived external threats and to problem-solve. Homework assignments were administered to help the children to generalize the skills they learned to their natural environments. Perhaps the children in the intervention group learned to manage life stressors and make healthier life decisions, including regarding those that placed them at-risk for exposure to and victimization by community violence.

In the FRIENDS parent session, the FRIENDS leader encouraged parents/caregivers to observe their children and be available to hear and help process their children's concerns and stresses. Multiple caregivers indicated difficulty in doing so because they felt overly stressed themselves (e.g., working more than one job; caring for multiple children, grandchildren, and/or great-grandchildren; severe economic challenges; and/or limited resources). Previous studies have found some added benefits of family anxiety management training or parent management training in interventions with anxious youth (Barrett, Duffy, Dadds, & Rapee, 2001; Bernstein, Layne, Egan, & Tennison, 2005). In future interventions with community violence exposed youth, a comprehensive parental intervention may be warranted, although sufficient resources should be allocated to address the challenges to participation.

Teaching urban, primarily African American children with greater life stressors, fewer resources and social supports (Myers & Taylor, 1998) to reward themselves, to talk to their friends about their problems, and make friends in order to build social support networks (i.e., "traditional" conceptualizations of developing positive peer relationships) – as the FRIENDS Program is designed to do -- may be problematic without ample consideration of the cultural milieu. For example, peer relations among urban ethnic minority youth may be adversely complicated by concerns of appearing "weak" (e.g., fearful, nervous, emotionally needy) because perceived weakness may make inner-city residents more vulnerable to violence victimization. Enhanced coping skills and social support have helped reduce the effects of community violence exposure on African American youth (Edlynn, Gaylord-Harden, Richards & Miller, 2008; Hammack, Richards, Luo, Edlynn & Roy, 2004), although programs designed to teach these capacities should include methods to identify and elicit rewarding sources of prosocial support.

### *Limitations*

One limitation of the current study is frequently found in school- and community-based research projects involving ethnic minority participants: Low parental consent rates. Students are prevented from reaping potential benefits of school-based mental health programs if their parents do not consent to their participation (Stein, Jaycox, Langley, Kataoka, Wilkins & Wong, 2007). Parental permission and child assent rates obtained during the first stage of screening were acceptable (82%), but parental consent was only in the low-moderate range (59%) in the second stage despite active recruitment strategies. The most effective mechanism for parental cooperation was linked to building the school community's trust over time and enhancing the parent's relationship and comfort with the school. Nonetheless, as a result of the relatively small and highly selected sample, the study's power and generalizability are restricted.

There were exceptions (WIAT Screener, C-DISC) but the majority of outcome measures reported in this study are self-report questionnaires. Data from additional informants at pre- and post-intervention would have strengthened this investigation, as would behavioral measures of the efficacy of the FRIENDS intervention (e.g., psychophysiological, neurobehavioral assessments). The study was designed to obtain both teacher and parent reports. The former was obtained as part of the screening procedure (i.e., teacher nominations), but neither was obtained for the outcome measures. The original approach of sending parental report forms home for parents/caregivers to complete proved to be inadequate and was discontinued. Future studies should allocate sufficient resources to obtain outcome data from multiple informants (e.g., in-person or telephone interviews, sufficient incentives, adequate tracking procedures).

The results of the current study indicated significant decreases in self-reported anxiety for both the intervention and control groups in the within-group comparisons. However, the assessments were conducted immediately following treatment, as the end of the school year had

arrived, and there were no significant between-group differences. A longer follow-up may have yielded differential results for the two groups. Some other child anxiety preventive intervention studies have not observed significant improvements until a substantial amount of time has passed and the children have been able to implement, practice, and generalize the skills that they have learned. For example, Dadds et al. (1997) did not find significant differences in anxiety reduction among children who participated in the anxiety intervention compared to controls immediately following treatment, but the intervention group maintained their treatment gains over 6- and 24-months whereas the control group did not. Another study did not find significant changes in children's self-reported anxiety in an efficacy study of the FRIENDS intervention, although parental reports indicated significantly decreased anxiety among children who participated in the intervention compared to the controls (Bernstein et al., 2005), suggesting the importance of involving parents as informants in studies involving anxious children.

The current study lacked a clearly delineated comparison group, which also may have contributed to the failure to find between-group differences, yet there were within-group differences. The FRIENDS Team was given a classroom in the school where both intervention and control group students completed their assessment batteries and were welcomed to visit (i.e., get snacks, draw, chat). FRIENDS staff became active and integrated members of the school community (e.g., attended school events, Back-to-School Night, PTA meetings, talent shows, basketball games). Control students reported liking being "members of the FRIENDS Team" as much as the intervention participants. Some reported the FRIENDS program was the only organized "team" to which they belonged, a reflection of the under-resourced environments in which they lived. The unanticipated impact of this relationship may have attenuated distinctions between the intervention and control groups, at least in the short-term and may speak to the

power of creating community and meaningful relationships beyond the proscribed intervention.

### *Future Studies*

It is well established that African American youth are less likely than European Americans to receive appropriate treatment for anxiety problems (Young, Klap, Sherbourne, & Wells, 2001). After school programs may be ideal venues for time- and resource-intensive interventions because they provide the security and resources of the school setting, community accessibility, and reduced costs and stigma associated with clinical settings. The FRIENDS Program was implemented in only 13 contact hours with the students, yet resulted in significant gains for this underserved population. It speaks to the need to continue to develop comprehensive, multi-component preventive intervention efforts that target not only anxiety, but also developmentally, ecologically, culturally and contextually appropriate factors within a community environment. Future studies designed to prevent the adverse effects of youth's exposure to stressful community violence should involve larger sample sizes, longer-term follow-ups, more comprehensive preventive intervention programs, and comprehensive multi-informant assessments of cognitive, neuropsychological, behavioral, academic, and/or social outcomes, not just those constructs directly related to anxiety. Understanding developmental timing and optimal dosage levels are also important. Cost-effectiveness studies are needed, as preventive and treatment interventions conducted in school-based settings may have particular cost-efficiency over the long-term. Intervening with urban African American youth who have been chronically exposed to community violence even using a brief, focused intervention resulted in within-group improvements in emotional, behavioral, and academic well-being.

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Table 1.

*Baseline Characteristics of the FRIENDS Intervention and Control group (N=93)*

<b>Variables</b>	<b>Intervention Group (N=48)</b>	<b>Control Group (N=45)</b>	
	<b>n (%)</b>	<b>n (%)</b>	<b>Chi-squared (df)</b>
<b>Gender</b>			
Males	24 (0.5)	24 (0.53)	0.35 (2)
Females	24 (0.5)	21 (0.47)	
<b>Race/Ethnicity</b>			
African American	45 (0.94)	40 (0.89)	0.74 (2)
Mixed/Biracial	3 (0.06)	5 (0.11)	
	<b>Mean (SD)</b>	<b>Mean (SD)</b>	<b>F-statistic (df)</b>
<b>Age (years)</b>	9.47 (1.16)	9.35 (1.0)	2.419 (2)
<b>CREV Total</b>	46.15 (17.86)	49.25 (20.72)	0.91 (2)
<b>RCMAS Total</b>	16.71 (4.97)	16.00 (5.86)	1.89 (2)
<b>WIAT Composite-Age Equivalent</b>	9.72 (1.60)	9.88 (1.30)	0.68 (2)
<b>MESA Total Score</b>	17.96 (9.48)	18.57 (9.41)	1.79 (2)

All  $p$ 's > .05.

Table 2.  
 Within group baseline and post-intervention differences (N=93)

Measure	Intervention (n= 48)			Control (n=45)		
	Baseline Mean (SD)	Post-intervention Mean (SD)	Pre/Post Paired Mean Difference (SD)	Baseline Mean (SD)	Post-intervention Mean (SD)	Pre/Post Paired Mean Difference (SD)
<b>CREV Total</b>	33.7 (13.4)	19.4 (14.0)	-14.3 (17.3)**	36.0 (18.1)	25.6 (15.9)	-10.4 (16.7)**
CREV Victimization	1.8 (2.1)	0.6 (1.2)	-1.1 (1.9)**	1.7 (1.6)	1.0 (1.7)	-0.6 (2.3)
<b>RCMAS Total</b>	17.1 (4.7)	12.1 (6.5)	-5.0 (6.7)**	15.8 (5.3)	10.9 (4.7)	-5.0 (5.9)**
<b>WIAT Reading</b> (Age equivalent)	9.5 (1.4)	10.2 (1.9)	0.7 (0.9)**	9.9 (1.4)	10.3 (1.7)	0.4 (0.8)**
<b>WIAT Math</b> (Age equivalent)	9.6 (1.9)	10.0 (1.8)	0.4 (0.9)**	9.7 (1.3)	9.8 (1.1)	0.2 (0.6)
<b>MESA Total</b>	17.4 (9.2)	12.7 (12.4)	-4.7 (9.5)**	18.6 (9.6)	14.8 (11.4)	-3.9 (12.3)

<sup>T</sup> $p < 0.10$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ .