

**An Ounce of Prevention: Evaluation of the Fun FRIENDS program for Kindergarteners in a Rural School**

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## Abstract

Anxiety disorders are among the most common psychological disorders in childhood with reported rates as *high as 41.2%* (Cartwright-Hatton, McNicol, & Doubleday, 2006; Cooley, Boyd, & Grados, 2004). A majority of the anxiety intervention programs target children who are 7 years of age and older. Yet, many anxiety disorders develop in the preschool years (APA, 2000). Therefore, it seems desirable to work with young children who display early signs of anxiety to provide them with skills that would protect them from later full-blown psychopathology. Early intervention and prevention programs may be effective ways to modify the developmental trajectory of anxiety disorders.

The present research reports findings from an anxiety prevention program for 4-7 year olds. One hundred and ten children from two schools in a rural part of Southwest Virginia participated. Fifty-seven children from one school received a classroom-based prevention program on a weekly basis over 20 weeks. Fifty-three children from a second school served as a control group. The mean age of the sample was 5.11 years. Results suggested that anxiety was positively correlated with emotional symptoms ( $r = .67, p < .001$ ), peer difficulties ( $r = .21, p < .05$ ), and total difficulties ( $r = .29, p < .03$ ) on the Strengths and Difficulties Questionnaire for all children. Overall, there were significant decreases in anxiety symptoms from pre to follow-up for both groups of children [ $F(1, 105) = 7.79, p = .006$ ]. Unexpectedly, anxiety symptoms increased from pre to post for children in the intervention school whereas they decreased for children in the control school. Although these

findings are reversed of what was expected, these results may have important implications concerning the importance of providing anxiety education and awareness for teachers. Implications of the current findings, limitations of the study, and directions for future research and dissemination are discussed.

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## *Introduction*

Over the last 20 years, mental health needs of children and families have become a national priority. The Surgeon's General report (1999) has endorsed mental health promotion and the use of empirically supported interventions as effective strategies for preventing, and treating mental health disorders in children and adults. Prevention science is largely informed by developmental and ecological theory, which helps to create an appropriate avenue for designing evidence-based programs aimed at preventing mental health disorders in youth (Domitrovich, Bradshaw, Greenberg, Embry, Poduska, & Ialongo, 2010). As noted in Greenberg, Domitrovich, and Bumbarger (2001), "... models from public health, epidemiology, sociology, and developmental psychopathology are essential in conceptualizing, designing and implementing preventive interventions." Many prevention programs have been developed that target substance use and smoking, violence, and general health related behaviors. In recognizing the potential of these programs, a bill was passed that allows the U.S Department of Education to provide grants to fund the implementation and evaluation of evidence-based programs focusing on social and emotional learning as well (DeAngelis, 2010).

In the prevention field, experts have been working for many years to disseminate research that highlights the importance of social and emotional learning skills in order to encourage schools to focus more on the development of these skills in early childhood. There is considerable research demonstrating positive links between social and emotional functioning and academic outcomes (Fleming, Haggerty, Catalano, Harachi, Mazza, & Gruman, 2005; Zins, Bloodworth, Weissberg, & Walberg, 2007). Zins et al. (2007), for example, emphasize various factors that contribute to a child's academic success, including social, emotional, and behavioral skills of the child as well as the general learning environment. Developmentally appropriate

programming should address risk factors from multiple levels of a child's environment, focusing on several ecological levels (Bronfenbrenner & Morris, 1998). This entails identifying risk factors specific to the child and then targeting contextual variables, such as school, social, and home environments, to help increase protective factors and prevent the manifestation of symptoms within the child.

Research has demonstrated that children with deficits in social and emotional skills often manifest emotional and behavioral symptoms, which can develop into psychological disorders and lead to academic failure (Goodwin, Fergusson, & Horwood, 2004; Whitted, 2011). Anxious-withdrawn behaviors in young children are linked to deficits in social skills and emotion regulation difficulties (Cole, Zahn-Waxler, Fox, Usher, & Welsh, 1996); furthermore, children with social withdrawal behaviors are concurrently and predictively at risk for a range of negative outcomes. More recent research has suggested that children with anxiety disorders have deficits in their ability to regulate emotion (Suveg & Zeman, 2004). Moreover, children with anxiety experience emotions more intensely, demonstrate dysregulated management of their emotions, and generally exhibit less adaptive coping when in situations prompting negative emotions (sadness, worry, anger) than children without anxiety.

Anxiety disorders are among the most common psychological disorders experienced by children with reported rates as high as 41.2% (Cartwright-Hatton, McNicol, & Doubleday, 2006; Cooley, Boyd, & Grados, 2004). Costello, Egger, and Angold (2004) report that up to 20% of youth experience anxiety during their lifetime and four to six out of every 30 children in classrooms will experience clinically significant anxiety symptoms (Farrell, Barrett, & Ollendick, 2007). Egger and Angold (2006) conducted a review of the limited research on psychopathology in young children and reported that anxiety difficulties in young children are

comparable to those reported for older children in terms of prevalence, stability, and impairment. Cartwright-Hatton et al. (2006) suggest that anxiety onset is often at an early age. Thus, the importance of identifying early risk factors of later psychopathology is evident. Statistics from the past decade highlight an unmet need; more specifically, approximately 20% of children and adolescents (1 out of every 5) experience mental health problems within a year; moreover, as many as 80% of these children do not receive appropriate services and interventions (Alkon, Ramler, & MacLennan, 2003; Kataoka, Zhang, & Wells, 2002; US Department of Health and Human Services, 1999). Although research suggests that early onset anxiety disorders may lead to greater chronicity and impairment, these children are infrequently referred for treatment (Egger & Angold, 2006; Furniss, Beyer, & Guggenmos, 2006; Weissman et al., 1999). These rates are alarming and point to a need for improved identification of symptoms in young children and increased accessibility of services.

For many children, anxiety results in considerable difficulties in school situations, interferes with academic work, increases social, familial, and personal distress, and can interfere in daily activities. We have begun to identify risk factors and map the developmental trajectory of anxiety in youth; however, the path remains unclear. Nonetheless, it is important to provide children with protective skills and to intervene as early as possible. Providing services in schools by utilizing preventive interventions and increasing early screening would help to decrease the number of children who do not receive services. Once identified, children with anxiety disorders need to be treated. If left untreated, anxiety can be chronic and disabling, leading to detrimental effects in several areas of functioning. Research has also indicated that early anxiety tends to precede the development of other anxiety disorders and depression in youth (Farrell et al., 2007; Ialongo, Edelsohn, Werthamer-Larson, Crockett, & Kellam, 1994). Last, Perrin, Hersen, and

Kazdin (1996) reported that 65 to 95% of anxious children and youth also experience comorbid anxiety disorders and 22 to 44 % of anxious youth experience comorbid depression. These statistics highlight the importance of early identification and treatment of anxiety in children and adolescents as well as the need for promotion of protective factors in early childhood. Identifying the early correlates of anxiety in young children may prove difficult; however, research is presented below on specific behavior patterns and risk factors that may help to identify children at-risk for anxiety.

Anxiety symptoms in children are heterogeneous and manifested in various ways. Children may not perceive their symptoms as interfering because they frequently avoid those things that cause them distress and anxiety, such as social activities, novel experiences, and performing in front of others (Kendall et al., 2010). Furthermore, young children are not able to fully describe their anxiety verbally and, as a result, anxiety has a strong behavioral component for these children (Glennon & Weisz, 1978). These behaviors in young children may be inhibited, passive behaviors (i.e., poor eye contact, soft voice, hiding behind mom, etc.) or behaviors that appear to be more externalizing in nature (i.e., tantrums, rigidity, difficulties with transitions). Understandably, in the school context, teachers pay most attention to disruptive children, more often than not failing to identify children with underlying anxiety symptoms in their classroom. Furthermore, it is possible that the children being identified for disruptive behaviors may be experiencing anxiety as well. Wood (2006) and Mazzone et al. (2007) both provide data that demonstrates the negative relationship of anxiety with school performance for children and adolescents. Therefore, it is important to educate teachers on the signs and symptoms of anxiety and provide them with skills to intervene with children in their classrooms who experience anxiety.

Identifying risk factors in children is important; however, it is equally important to provide all children with protective skills. Prevention programs should focus on early identification of anxious children and promotion of positive skills in youth. However, research examining prevention efforts in young children (younger than 7) is limited. Rapee, Kennedy, Ingram, Edwards, and Sweeney (2005) indicate that delivering interventions during the preschool years (3 to 5), when children are exhibiting inhibited behaviors, may represent an ideal time for intervention. Research outlining developmentally appropriate fears, risk behaviors, and protective factors in young children is presented below.

#### *Prevalence of Fear and Anxiety in Young Children*

Normal developmental fears exist at all ages; however developmental research suggests that excessive fear during early childhood may often be a temperamental pattern indicative of later anxiety difficulties. Most young children experience fear; most commonly, the fear in later infancy and early toddlerhood may be of strangers, but this fear is not symptomatic of a disorder. When this fear is present at age 3 or 4 and interferes with the child's ability to interact with classmates at daycare or separate from their parents in other situations, it then becomes problematic. Normal fears change with the developmental period, such that the fear of strangers is normally present during infancy, whereas fear of animals tends to be present during toddlerhood. As noted, it is only when these fears persist and become debilitating that we may then provide a diagnosis of a specific disorder.

As young children develop physically and cognitively, we would expect the fear to dissipate. Ollendick and Horsch (2007) indicate that as children get older they are better able to use their cognitive capacities to identify danger in potentially threatening situations. Fear is evolutionally adaptive and protective in most cases when the fear is not excessive and interfering

with daily living. Individual differences in emotion regulation capabilities emerge early in children; however, in some children they become maladaptive (Hannesdottir & Ollendick, 2007). Biological and environmental factors contribute to the regulation difficulties that children may experience. Some children have inhibited temperaments and as infants may be high in negative reactivity, whereas some parents may become overprotective and fail to allow the child to develop coping strategies, all of which are linked to inhibited and anxious behaviors in youth (Degnan & Fox, 2007).

Although the DSM-IV does not provide an appropriate taxonomy of anxiety symptoms in young children, research suggests that young children experience similar symptomatology specific to certain anxiety disorders (Eley, 2001; Spence et al., 2001). The DSM-PC was developed to address the DSM-IV's lack of developmental sensitivity (Wolraich, Felice, & Drotar, 1996). There have been other measures developed for the purpose of assessing symptoms in young children. The use of the Preschool Anxiety Scale for Children (Spence, Rapee, McDonald, & Ingram, 2001) allows researchers to identify diagnostic patterns of anxiety in younger children. Additionally, research using the Anxiety Disorder Interview Schedule for Children (ADIS) and the Kiddie Schedule for Affective Disorders (KSADS) with young children highlights the ability to differentiate among the anxiety disorders in youth (Hudson & Dodd, 2012). Research suggests that children as young as 5 years old can reliably report anxious symptomatology, and toddlers and preschool aged children exhibit extreme inhibition to novel and social situations indicating risk of later anxiety (Ialongo et al., 1994, 1996; Kennedy, Rapee, Edwards, 2009).

### *Risk and Protective Factors*

Several risk and protective factors have been found to be associated with the

development of anxiety disorders in young children. There are biological, psychological, social, familial, and environmental factors that contribute to the development of anxious symptomatology. Some of these factors that are present and important during early childhood include: behavioral inhibition, parent psychopathology, parenting behaviors, emotion regulation, and social skills (Barrett & Farrell, 2007; Hudson, Dodd, & Bovopoulos, 2011).

Behavioral inhibition (BI) is a well-reviewed construct describing an inhibited, withdrawn temperament in young children. Research suggests that 15% to 20% of young children experience intense shyness, fear, and social withdrawal in novel situations (Fox, Henderson, Rubin, Calkins, & Schmidt, 2001; Kagan, Reznick, & Snidman, 1987). Dilalla, Kagan, and Reznick (1994) reported that 50-80% of the variance in behavioral inhibition is accounted for by genes, suggesting that BI is highly heritable. Along with behavioral inhibition, there have been other identified risk factors in early childhood that may lead to the development of later clinical symptoms of anxiety.

Parental anxiety, parenting practices, and social emotional competence are all independently related to the development and maintenance of child anxiety (Ginsburg, LaGreca, & Silverman, 1998; Kagan & Snidman, 1999; Wood, McLeod, Sigman, Hwang, & Chu, 2003). Research suggests that specific parenting practices are related to child anxiety, such as parental acceptance or warmth, parental control, and anxious modeling of behaviors; often, these parenting behaviors are tied to parental psychopathology (Edwards, Rapee, & Kennedy, 2010; Whaley, Pinto, Sigman, 1999; Wood et al., 2003). Further, there is research demonstrating the positive relationship between maternal anxiety and child anxiety (McClure, Brennan, Hammen, & LeBrocq, 2001). Children of anxiety-disordered parents are up to seven times more likely to develop an anxiety disorder (Beidel & Turner, 1996; Biederman et al., 2006). As

noted by Kumpfer and Alvarado (2003), strong and effective parents are extremely important and help to prevent the later development of psychopathology in youth. It is important that these factors are acknowledged in the prevention and treatment of child anxiety. Kagan and Snidman (1999) collected data from children of panic disordered adults and demonstrated that these children were more likely than controls to show behavioral inhibition. Extensive evidence supporting the methods of transmission of risk factors and anxiety symptoms indicate that parenting behaviors, as well as biological influences, play a role in the development of anxiety in young children (Kennedy et al., 2009). Furthermore, this research suggests that the extent to which inhibition and early risk factors are maintained throughout childhood is dependent on environmental factors and early intervention (Kennedy et al., 2009; Rapee, 2002).

### *Social-Emotional Development in Young Children*

Social emotional competence is an important protective factor in children, as it can buffer the effects of stressors and can alter the developmental trajectory of certain emotional and behavioral problems (Pahl & Barrett, 2007). Social emotional competence can be defined as having the ability to regulate emotions and control behaviors in a way that allows a child to effectively communicate a problem or concern and to demonstrate appropriate social skills. Often, prior to the elementary school years, emphasis is placed on the development of positive social and emotional skills. Social emotional skills as well as academic level are assessed when determining a child's readiness for kindergarten and elementary school (Blair, 2002). Moreover, schools can largely influence the development of social and emotional competence in young children. Greenberg et al. (2003) suggest that school-based prevention programs target social, emotional, and academic learning. These researchers address the importance of incorporating social and emotional learning objectives within school programming and provide evidence of the

positive effects of these programs. The implementation of universal prevention programs would serve the purpose of providing these necessary skills to young children. Many research findings have demonstrated or suggested that academic achievement goes hand in hand with social and emotional competence (Heckman, 2000; Zins, Elias, Greenberg & Weissberg, 2000). Heckman (2000) strongly advocates for investing in young children to enhance these skills and prevent future behavioral and psychological problems and he also indicates that when implemented in early childhood these programs are cost effective. Furthermore, the National Research Council and Institute of Medicine (2000) state that children who have these social and emotional skills are better adjusted and do well in school, have better social relationships, communicate well, and have increased confidence among other positive traits.

Raver and Knitzer (2002) provide an overview of research findings related to social and emotional competence in young children and they describe implications of this research for policy makers. Despite children being identified in the early years as having emotional or behavioral difficulties, there is a “multi-year lag” between the recognition of emotional and/or behavioral difficulties in children and getting the necessary services (Raver & Knitzer, 2002). There are many negative effects for children who lack developmentally appropriate social and emotional skills. Deficits in social skills, specifically assertiveness, have been linked to difficulties in peer relationships for children with anxiety (Strauss, Lease, Kazdin, Dulcan, & Last, 1989). Peer relationships and friendships, as noted by Ladd, Kochenderfer, and Coleman (2008) serve as key emotional and instrumental resources and help children transition from kindergarten into first grade. Therefore, strong social and emotional skills are especially advantageous during these early years.

Suveg and Zeman (2004) suggest that a necessary skill for emotional competency is being able to “regulate emotion in flexible and adaptive ways in response to the demands of the social context” (p.704). Research demonstrates negative relationships between emotion regulation skills and internalizing and externalizing symptoms in children with psychopathology (Southam-Gerow & Kendall, 2000; Suveg & Zeman, 2004). For example, Suveg, Zeman, and Stegall (2001) reported that anxious children do not use adaptive methods of regulating emotions, rather they tend to use more inhibited and dysregulated means of coping with feelings of worry, sadness, and being scared. Other results from Suveg and Zeman’s (2004) study with anxious children support the theory of emotion regulation being central to emotion competence. This research demonstrates the importance of emotional competence for children at risk and with anxiety disorders.

Furthermore, a significant amount of research links emotional competence with social competence and highlights the importance of the interplay between those two areas (Cicchetti, Ackerman, & Izard, 1995). Research by Kim and Cicchetti (2003) demonstrate that the lack of social self-efficacy is related to internalizing symptoms for children without a maltreatment history suggesting that the perceived ability to function in conflict situations is important for all children. It is important for young children to feel confident in their ability to socialize and interact with peers to prevent later development of peer difficulties. Efficacy develops from mastery experiences and therefore, a child’s positive social experience would serve to increase their social self-efficacy (Bandura, 1997). Additionally, research has identified a positive relationship between a child’s ability to develop a number of prosocial solutions to hypothetical situations and peer acceptance (Raver & Zigler, 1991). It is important to help children develop appropriate problem solving skills to improve their social interactions. Social competence is an

important protective factor for children and relates to internalizing symptoms, such as withdrawal and anxiety (Ginsburg et al., 1998).

As noted earlier, there is a great deal of research that demonstrates the negative outcomes of children who lack social and emotional skills (Aviles, Anderson, Davila, 2005; Denham, 2006; Patterson & Stoolmiller, 1991). Children who lack these essential skills tend to have difficulty in the classroom and have trouble developing positive peer relationships (Pahl & Barrett, 2007). Many kindergarten teachers report that at least 20% of children in their classrooms lack appropriate social skills (Domitrovich, Cortes, & Greenberg, 2007). Much of the aforementioned research suggests that social and emotional skills at an early age can predict later academic, social, and emotional competence. For this reason, interventions targeting young children have been developed to increase social and emotional skill acquisition. The successful integration of cognitive, emotional, and behavioral skills is necessary for socially competent behavior.

### *School-based mental health programming*

School mental health programs have been growing exponentially over the last decade, as there have been many efforts to expand mental health services to schools (Evans, Weist, & Serpell, 2007; Weist, Stiegler, Stephan, Cox, & Vaughan, 2009). As noted by Weist, Evans, and Lever (2003) and Weist (1997), there are many advantages to implementing mental health services in the school environment. Furthermore, a large number of prevention and treatment programs delivered in schools have been shown to be effective in producing change (discussed below). Schools play an important part in raising healthy children, by focusing not only on their cognitive development, but also their social and emotional health. However, schools have limited

resources to invest in all three areas and have increasingly high demands for demonstrating heightened academic performance; therefore, mental health programming that focuses on social and emotional health is extremely valuable but not well supported. A meta-analysis conducted by Durlak, Weissberg, Dymnicki, Taylor, and Schellinger (2011), including 213 school-based, universal social and emotional learning programs, demonstrated that children participating in SEL (Social-Emotional Learning) programs demonstrated significantly improved social and emotional skills, attitudes, behavior, and academic performance.

The Institute of Medicine report (2009), *Preventing Mental, Emotional, and Behavioral Disorders Among Youth People: Progress and Possibilities*, indicates that the implementation of evidence-based prevention is a priority. Research suggests that in schools children are more accessible, the costs of providing services are lower, there is a natural environment for children to practice skills, and parents do not have transportation and financial barriers to receiving treatment for their children (Mihalopoulos, Vos, Pirkis, & Carter, 2011). For over 15 years, the University of Maryland Center for School Mental Health (CSMH) has been researching effective implementation of school-based mental health services and provides services in collaboration with the Johns Hopkins Center for Prevention and Intervention (CPEI). As a result, schools in Baltimore and surrounding Maryland counties have strong, trusting relationships with these universities. There have been several studies that highlight the effectiveness of relatively brief CBT treatments in schools (Ginsburg, Becker, Drazdowski, & Tein, 2011). Moreover, several school-based RCTs comparing CBT to an attention control group or waitlist control group have demonstrated positive effects (Ginsburg, Becker, Kingery, & Nichols, 2008; Masia-Warner et al., 2005). These studies provide support for delivering CBT in the schools and highlight the added benefits of training school personnel to deliver these programs.

The development of school-based mental health programs represents a growing area of research (Greenberg et al., 2003). Research in this field can influence social and educational policy, in that the focus of educating a child combines intellectual development as well as social and emotional development, both of which contribute to school success (Blair & Diamond, 2008; Greenberg et al., 2003). Angelosante, Colognori, Goldstein, and Warner (2010) highlight the advantages of school based intervention, such that: (1) allows for easy access for youth; (2) reduces barriers to treatment; (3) increases attendance; (4) provides opportunities for early identification and treatment; (5) prevents development of secondary disorders; (6) decreases stigma; and (7) allows for real-world practice. Furthermore, there are similar advantages of utilizing universal prevention interventions in the school context, which include reaching a broad range of children and adolescents with varying risk levels for psychopathology, increasing the chances of early identification of children in need of further services, and reducing stigmatization in children with these problems (Barrett, Farrell, Ollendick, & Dadds, 2006). There is evidence that prevention programs can be integrated into the school curriculum and be highly effective (Barrett et al., 2001; 2006).

In addition, early intervention and prevention programs are effective ways to modify the developmental trajectory of anxiety disorders and their related problems. There is some evidence to suggest behaviors at a younger age are more malleable before rigid and treatment resistant responses patterns have developed (Craske & Zucker, 2002; Dadds et al., 1997). Although these programs exist, many schools are not utilizing them, demonstrating a need for more collaboration between the university and school communities. As noted, research shows that children who really need services rarely receive those services and often times those with anxiety disorders are *least* likely to be referred for treatment (Mifsud & Rapee, 2005). For that reason,

school-based mental health services and universal prevention programs are advantageous for youth.

Durlak and Wells (1997) present a compelling argument for the benefits of school-based prevention programs in a comprehensive meta-analysis. They examined 177 primary prevention programs for children under the age of 18. Of these programs, 73% were conducted in school settings and mean effect sizes for these programs ranged from .24 to .93. The findings of these studies also demonstrated increases in academic performance as well as individual and social skills, and the strongest benefits were for children ages 2 to 7, which supports the supposition that early prevention and intervention programs are most beneficial. Since the first call to action in the 1980s by the “American Psychological Association’s Task Force on Prevention, Promotion, and Intervention: Alternatives in Psychology”, major progress has been made in developing well validated and effective programs; however, there are many areas still needing development, such as early identification and accessibility (Weissburg, Kumpfer, & Seligman, 2003). Utilizing schools for mental health promotion and prevention efforts offers a feasible and exciting alternative to relying on community health care systems to identify and treat children already experiencing significant anxiety.

### *School-Based/Community Prevention and Intervention Programs*

As noted there have been several effective primary prevention programs that have shown positive results in the school setting. For example, the Primary Mental Health Project (PMHP, Cowen, Hightower, Pedro-Carroll, Work, Wyman, & Haffey, 1996) targets children who have been identified with social, emotional, and learning difficulties and aims to reduce internalizing symptoms. This program is an exemplary school-based mental health program that improves

social and emotional functioning in children as well as decreases school behavioral problems. The intervention focuses on the school environmental as well as individual characteristics of the child. This program targets children with mild to moderate behavioral difficulties. The PMHP program incorporates a mental health professional, teacher, child associate, and the child with the goal of providing skills to the child to prevent further development of behavioral and adjustment difficulties. Years of research with PMHP show encouraging effects for prevention programs targeting internalizing symptoms. Symptoms of moody-withdrawn behavior were reduced and effects remained up to 12 months following the intervention.

Another effective school-based mental health program is the I Can Problem Solve (ICPS) program, which is a universal program targeting social competence and problem solving in children. This program has been around for many years and has demonstrated positive results by increasing problem solving skills in children (Shure, 2001; Shure & Spivak, 1979). These programs have demonstrated encouraging results; however, they do not specifically target child anxiety nor have they been shown to prevent later development of anxiety symptoms.

There are other community programs that have been developed to address inhibition and anxiety in younger children. There have been two published efficacy trials of the Cool Little Kids program (Bayer et al. (2011), which is an anxiety prevention program for preschoolers. Preschoolers are systematically screened for temperamental inhibition and their parents are offered a parent group intervention. As mentioned earlier, results of these interventions were successful in reducing internalizing behaviors up to 3 years later. More recent translational studies are being conducted using the Cool Little Kids program. Moreover, Hirshfeld-Becker et al. (2010) report positive effects of the “Being Brave” program, which is a parent-child CBT program focused on reducing anxiety symptomatology in preschoolers. This

developmentally modified CBT program was effective in reducing anxiety in young children; however, behavior inhibition negatively predicted treatment response, which supports earlier theories demonstrating the relationship between BI and anxiety in children (Hirshfeld-Beck et al., 2007). Lastly, research utilizing another program “Reach for Resilience” has reported significant reductions of anxiety symptoms in preschoolers (Dadds & Roth, 2008). These sample community based programs are promising, yet further research on school-based anxiety programs specifically targeting anxiety in young children is needed.

#### *Treatment of Anxiety using CBT-based Programs*

The first-line of treatment for childhood anxiety is Cognitive-Behavioral Therapy (CBT), either alone or in conjunction with psychopharmacological intervention (Walkup et al., 2008). There have been several efficacious psychological treatments for anxiety; the majority of which incorporate CBT, which has been shown to be the most effective treatment for anxiety (Ollendick & King, 1998; 2004; Ollendick & Davis, 2012). The tripartite model of child anxiety explains the development of anxious behaviors in children and identifies three important factors that maintain anxiety: physiological features, cognitive ideations, and behavioral responses (Ollendick, Shortt, & Sander, 2005). The underlying principles of CBT are based in cognitive and behavioral theories and utilize techniques targeting those three important areas of anxiety: physiology, cognition, and behavior. Most cognitive-behavioral treatments for child anxiety include the following components: psychoeducation, relaxation skills, cognitive restructuring, problem solving, and behavioral exposures (Albano & Kendall, 2002; Silverman et al., 1999). This approach demonstrates that learning to control physiological reactions, challenging

cognitive beliefs, being exposed to the anxiety provoking situation or stimuli, and preventing avoidance of the anxiety response, can decrease anxiety.

CBT principles have been adapted to be developmentally appropriate for children and adolescents. These modifications have demonstrated effectiveness in several treatment interventions by Kendall and colleagues (*Coping Cat*, 1994) and Barrett and colleagues (*FRIENDS*, 1996) and several other research groups noted above. The *Coping Cat* program (Kendall, 1994) was used in the first randomized control study which documented the effectiveness of CBT with children for the treatment of anxiety disorders. Results from clinical trials using the *Coping Cat* program indicate that 64 % of the children who received the treatment experienced significant improvements. Barrett (1996) conducted a similar trial comparing Kendall's *Coping Cat* program with a CBT plus family condition and respectively, 61% and 88% of children no longer met criteria for an anxiety disorder. Several other clinical interventions for child anxiety have demonstrated efficacy and effectiveness of CBT with children from different age groups, cultural groups, and delivered in individual and group formats (Barrett, 1996; Howard & Kendall, 1996; Gallegos, 2008; Kendall & Southam-Gerow, 1996; Mendlowitz et al., 1999; Shortt, Barrett, & Fox, 2001).

There are also studies demonstrating positive longitudinal results of CBT treatment for anxiety in youth. Barrett, Duffy, Dadds, and Rapee (2001) reported significant treatment effects lasting up to six years for a group of Australian youth. Similar research with childhood phobias has demonstrated that fear can be reduced with cognitive-behavioral treatment (Ollendick, Davies, & Muris, 2004). Clearly, these clinical trials and interventions are effective as treatment programs, as they teach necessary skills to combat anxiety. However, treating children who already experience anxiety may not be the most effective or efficient means for reducing the

prevalence of childhood anxiety; thus research should focus more on prevention. Very few prevention and intervention programs, specifically targeting anxiety, have been developed for young children. Recent evidence has indicated that there is a need to incorporate emotion regulation skills in cognitive-behavioral therapy and intervention programs for anxiety (Hannesdottir & Ollendick, 2007). Despite significant advances in the last two decades, there is still much progress to be made. Currently, there are few universal school-based prevention programs targeting anxiety in young children. Therefore, the development of the Fun FRIENDS program comes at a good time when these specific preventative interventions for preschool and early elementary aged children are greatly needed.

There are three levels of prevention based on the presence or absence of risk factors: universal, selective, and indicated (Mrazek & Haggerty, 1994). Universal prevention are those programs that are applied to whole populations or classrooms, selective prevention programs are targeted to specific individuals or groups who display risk factors for developing a mental health disorder, and indicated prevention approaches require screening to identify individuals who are already reporting symptoms of a disorder. As noted, several studies have demonstrated the effectiveness of universal anxiety programs with youth and a majority of this research has been with the FRIENDS program in Australia. Findings from the Queensland Early Intervention and Prevention of Anxiety Project demonstrate a decrease in anxiety symptoms using a CBT intervention (*Coping Koala*) with children with mild to moderate symptoms of anxiety (Dadds, Spence, Holland, Barrett, and Laurens, 1997). The first controlled indicated prevention trial was conducted with a community cohort of children (Dadds et al. 1997). This project demonstrated no immediate group differences following the intervention, but at the 6-month assessment period a significant reduction in anxiety was evident and those children who participated in the program

were less likely to develop an anxiety disorder, whereas more children in the monitoring group developed an anxiety disorder. Improvements were maintained 24 months later (Dadds, Spence, Laurens, Mullins, & Barrett, 1999).

Given the literature demonstrating difficulties in maintaining participants in community trials, Barrett and Turner (2001) and Lowry-Webster, Barrett, and Dadds (2001) conducted school-based prevention trials using the FRIENDS program to determine the effectiveness of the program on anxiety and depressive symptoms in youth. The FRIENDS program is based on the *Coping Koala* program which is the Australian adapted version of Kendall's (1994) *Coping Cat* program (Barrett, Lowry-Webster, & Turner, 1999). Both studies demonstrated feasibility of school teachers implementing an anxiety prevention program for children; results from students in the teacher-led group were equally as good as those from the psychologist-led group (Barrett & Turner, 2001). Furthermore, the teacher-led and psychologist-led groups were significantly different than the monitoring-only group. In the Lowry-Webster et al. (2001) study, results yielded positive results showing decreases for children in the intervention group and indicated that 75.3 % of the high-risk children were no longer at risk at post intervention whereas 54.8 % were no longer at risk in the monitoring group. Long-term follow up assessments at 12 months continued to show effects with the children in the intervention group exhibiting fewer anxiety symptoms and 85% of the high risk children were diagnosis free compared to 31.2% in the monitoring condition (Lowry-Webster, Barrett, & Lock, 2003). Replication studies with children in the sixth and ninth grade demonstrated similar results (Lock & Barrett, 2003). Additional findings indicated that girls were more likely to be at-risk for anxiety, reported more anxiety over time, and girls in 6<sup>th</sup> grade showed greater reductions in anxiety over time than girls in 9<sup>th</sup> grade and boys in both grades (2003). Similar to findings with younger children, girls seemed to

benefit more from prevention interventions than boys (Pahl, 2009). These studies suggest that children can receive an adequate “dose” of universal prevention programs to effectively alter the developmental pathway of anxiety; however some kids may benefit more from these programs.

When implementing the school-based, teacher-administered interventions mentioned above, teachers met weekly with the program director for purposes of fidelity and supervision; however, these variables were not considered mediators of treatment effectiveness (Barrett & Turner, 2001; Lowry-Webster et al., 2001). As mentioned by the authors, detailed analyses were not conducted due to low power. Therefore, conclusions regarding the overall effectiveness of teachers implementing mental health prevention programs as opposed to specialists are elusive beyond showing comparable results. The school-based drug prevention literature suggests that teachers are effective in implementing these prevention programs (Elliott & Mihalic, 2004; Pentz, Trebow, Hansen, MacKinnon, Dwyer, Johnson et al., 1990). When mental health specialists administer anxiety prevention programs, similar effects are obtained (Dadds, Spence, Holland, Barrett, & Laurens, 1997). Hence, this literature leads us to hypothesize that teachers and school counselors can be just as effective in implementing mental health prevention interventions.

As noted above, there is a substantial amount of literature suggesting that school-based programs are effective in preventing and treating mental health disorders in children and adolescents. Furthermore, more recent literature demonstrates the positive effects of these programs on children from culturally diverse and disadvantaged backgrounds, demonstrating the potential generalizability of these programs. For example, Stopa, Barrett, and Golingi (2010) trialed the FRIENDS program in three schools in Australia with 963 children in fifth, sixth, and seventh grades. Results of their study showed decreases in anxiety and depressive symptoms,

which maintained long-term, as reported by the children. Decreases in peer and conduct problems and improvements in use of coping strategies were also reported. Another study conducted by Cooley-Strickland, Girffin, Otte, and Ko (2011) utilized the FRIENDS program with group of 3<sup>rd</sup>-5<sup>th</sup> graders (n=98) who were primarily African American and experienced high levels of community violence. Results of this study suggested some benefit of utilizing this program with African American children, as the intervention group demonstrated some improvement attributed to the program.

There have also been studies utilizing the FRIENDS program that have failed to find significant effects of the program. Rose, Miller, and Martinez (2009) utilized the FRIENDS program in British Columbia and reported no significant differences between the intervention and control groups, with both groups having significantly reduced anxiety symptoms at the end of the program. Similarly, in a more recent study utilizing the FRIENDS program, results demonstrated significant decreases in anxiety for all children in the study, regardless of treatment condition (Miller, Laye-Gindhu, Liu, March, Thordarson, Garland, 2011). In another study utilizing a culturally adapted version of the FRIENDS program, researchers failed to find significant difference between the intervention and control groups and all children reported decreases in anxiety over a six-month period (Miller et al., 2011).

Despite the existing effective universal and indicated prevention programs for children and adolescents, there is still a large need to evaluate interventions targeting anxiety and other internalizing disorders that are often overlooked because, as noted above, results are not convincing and there is little research with preschool aged children. Although, research supports CBT as an effective line of treatment and prevention for anxiety disorders in young children (Hirshfeld-Becker et al., 2010), there is limited research regarding CBT with young children,

fidelity of these programs, and factors affecting school-based implementation. Research demonstrates that mental health and behavioral consultants play an important role in the effectiveness of classroom-based interventions (Noell et al., 2005). Therefore, in the current study, implementation of the Fun FRIENDS program by the school guidance counselor, with the assistance of a graduate trained consultant, is expected to have a positive impact on anxiety symptoms in young children.

Early initiatives (i.e. Healthy People 2000) targeted the prevention of mental health disorders in youth; however, the prevalence of childhood and adolescent mental health disorders has not decreased (Greenberg, Domitrovich, & Bumbarger, 2001). Greenberg and colleagues (2001) highlight the importance of focusing on the developmental period in early childhood to provide children with skills to prevent the development of later disorders. Two advantages of universal prevention programs over indicated or selected interventions are: (1) little threat of stigmatization; and (2) the potential for a single intervention to influence multiple outcomes. On the other hand, some critics of prevention programs would say that these programs have a low dose effect and perhaps do not help the children most in need. Universal interventions target the general public or whole population, whereas selected interventions target subgroups of individuals that have been identified “at-risk.” Lastly, indicated interventions target individuals already experiencing mental health symptoms but not quite meeting criteria (Greenberg et al. 2001).

#### *Preliminary Studies of the Fun FRIENDS program*

Research from Australia and other countries report the effectiveness of the FRIENDS program (Barrett & Turner, 2001; Lowry-Webster, Barrett, & Dadds, 2001; Stallard, Simpson, Anderson, Hibbert, & Osborn, 2007). As noted earlier, the FRIENDS program is an adaptation

of the Coping Koala program that was based on Kendall's (1994) Coping Cat program. The Fun FRIENDS program is a downward extension of the FRIENDS program. The Fun FRIENDS program targets social emotional competence in young children between 4 and 7 years of age. The Fun FRIENDS program is designed to build resiliency and wellness, provide alternate solutions to problems, and target the biopsychosocial aspects of the child by focusing on the individual child and his/her environment (Pahl & Barrett, 2007). Preliminary results reported by Pahl and Barrett (2007) are positive and indicate decreases in anxiety symptoms for all children participating in the program ( $n=70$ ). Children (primarily females) demonstrated a significant decrease in anxious symptomatology from pre to post assessments. There was a large effect size for anxiety symptom improvement from the initial study with 150 children from pre to the 1-year follow-up ( $\eta^2 = .11$ ). A large effect size for parenting stress from pre to the 1 year follow-up was obtained ( $\eta^2 = .32$ ), suggesting significant decreases in reported parenting stress. Following the intervention, there were no significant differences between the intervention and control groups on parent reports. However, parents in the intervention group reported fewer anxiety symptoms for all children, and improved behavioral inhibition and greater social-emotional skills for the girls. Teacher reports demonstrated significant differences between the intervention and control groups on behavioral inhibition and social emotional strengths at the postintervention with a moderate effect size ( $d = .44$ ). Another trial of the Fun FRIENDS program with 134 children yielded large effect sizes for anxiety (partial  $\eta^2 = .14$ ) and behavioral inhibition (partial  $\eta^2 = .14$ ) measures across time (Pahl, 2009). The decrease in behavioral inhibition was only found in girls.

Given the reported decreases in anxiety and increases in social emotional skills at the 12-month follow-up, results from these studies appear promising and suggest that the Fun FRIENDS intervention has potential to be an effective prevention program. Similar to other prevention

programs, effects are more pronounced at the follow up time points rather than immediately following the intervention. Parental participation was relatively low in the preliminary studies mentioned above and therefore some of the non-significant group differences could be attributed to lack of parental participation and follow through with home activities. There is no other published data on the Fun FRIENDS program and this research study is the first trial of the program in the United States.

### *Current Study*

As indicated, several studies have demonstrated positive effects of school-based mental health services, which suggest that school clinicians are beneficial to students and teachers (Evans, 1999; Weist, 1999). It is anticipated that a collaborative effort between school personnel and clinicians will improve the lines of communication and enhance prevention efforts and service effectiveness in the school context. Accordingly, the aims of this study are threefold: (1) to explore the relationship of anxiety with social and emotional strengths; (2) to assess the feasibility of implementing a 12-week intervention during the school-day; and (3) to examine the effectiveness of a prevention program for anxiety in young children by assessing the extent of improvement in social-emotional strengths in youth and maintenance of decrease in anxiety symptoms (also evaluating whether the program has differential effects for children classified as high risk (based on anxiety symptoms)).

Initial analyses determined correlations among variables in the model. Specifically, we expected significant correlations between child anxiety symptoms, emotional symptoms, and social skills, such that child anxiety would be negatively related to social skills and emotional symptoms. We expected all children participating in the Fun FRIENDS intervention to maintain

normative levels of anxiety symptoms, show increases in their social skills, and show increases in emotion regulation skills between the pre, post, and three month follow up assessment periods. Gender differences in anxiety have not been demonstrated at this young age; therefore we did not expect any gender differences. We expected high-risk children (identified by being in the top 33% of total anxiety symptom scores) to show greater decreases in their anxiety symptoms and exhibit improvement in emotion regulation and social skills. Lastly, we conducted exploratory analyses to determine whether social emotional skills moderate the relationship between pre and post anxiety.

## **Methods**

### *Participants*

The current study involved 110 participants at two elementary schools in Giles County, Virginia (see Figure 1). These two schools volunteered to participate after receiving proposals detailing the research project and the principals and guidance counselors at each school met with the project coordinator. The first school that volunteered was designated the intervention school; the second school was then designated the control school after they expressed potential interest in implementing the program the following year. The intervention school had 59 children in 3 classrooms between the ages of 4 and 6 participating in the Fun FRIENDS groups and data were collected from 58 of those 59 children (one child was added to the class after the start of school). Data were collected from 53 children in the second school (15 parents did not provide permission for their child to participate) in 3 classrooms. Intervention data were collected from both schools at pre and post-intervention time points, and at 3-months following the end of the program in the intervention school. Individual classroom teachers completed questionnaires for each child in their classroom. Parents had the choice of opting out of having teachers complete questionnaires for their children. If a parent opted out of the teacher filling out the

questionnaires, their child still received the program, as it was implemented as a classroom-wide program. In the control school, parents received notice that teachers would be completing questionnaires on their child and parents had the opportunity to indicate they did not want the teacher to complete questionnaires on their child. Generally, there was limited demographic information collected (family composition, socioeconomic status, parental education, etc.), per request of the school. There were no exclusionary criteria for participating in the intervention; however, if any child had a diagnosis of an Autism Spectrum Disorder or an Intellectual Disability, their data were not included in the analyses. However, there were no children with severe language impairments or pervasive developmental disorders in the classrooms.

In order to maintain confidentiality, each child was assigned an identification number, which served as a means for protecting their identity. Teachers signed consent forms and were expected to maintain confidentiality regarding information on the children in their classroom. The guidance counselor collected questionnaires from each of the teachers in sealed envelopes and the envelopes were hand-delivered to the researcher. At the control school, the teachers were given a consent form and maintained the same level of confidentiality regarding completion of the questionnaires for each child in their class. These questionnaires were also hand-delivered to the researcher by the guidance counselor.

### *Facilitator Training*

A train-the-trainer model was adapted for purposes of this study. An advanced doctoral student, the project director, attended a 1-day training in Canada on the implementation of the Fun FRIENDS program. Subsequently, the student attended a three-hour workshop in Boston with Dr. Paula Barrett, developer of the program, who demonstrated proper implementation of

the program. Lastly, the graduate student received training directly from Dr. Barrett and affiliated staff at Pathways Health and Research Centre via Skype on how to train others to implement the Fun FRIENDS program. Subsequently, the graduate researcher trained the guidance counselor at the participating school in the Fun FRIENDS program. There was one 3-hour hands-on training session in which the graduate researcher provided a brief background of anxiety and depression in young children, reviewed the components of the Fun FRIENDS program, and demonstrated activities from the lessons. In addition, the graduate researcher had weekly meetings (during the intervention) with the guidance counselor and assisted in the implementation of the Fun FRIENDS program in the classrooms. The researcher was available via phone and email to address any questions or concerns from the guidance counselor. While implementing the Fun FRIENDS program over 20 weeks, the graduate student provided consultation to the guidance counselor to prepare for the weekly lessons and troubleshoot. The researcher encouraged teachers, parents, and school personnel to contact her with questions or concerns.

### *Procedure*

Once the intervention school was identified, information letters, consent/permission forms, and questionnaires were sent home to parents two weeks prior to the start of the intervention. Parents were provided an opportunity to read about the Fun FRIENDS program, attend a parent meeting that discussed the program and addressed questions or concerns that parents had about the program, and were encouraged to contact the guidance counselor with any questions or concerns. The letter stated that their child had been invited to participate in a classroom-based program to help build emotional resilience, coping skills, and problem solving abilities. Each parent was requested to sign the consent and permission form prior to the start of

the assessments. The control school was identified slightly after the intervention school. Parent information letters and consent forms were sent home. Parents returned signed forms if they did not want their child to participate (see Appendix 3-7).

Once consent was received, both teachers and parents filled out questionnaires at the intervention school and teachers completed forms at the control school. An informational session was held at the intervention school so the researcher and guidance counselor could explain the project to the parents and address any questions parents might have. Following completion of data collection at the pre assessment period, the intervention program was begun. The guidance counselor implemented the program in all three classrooms in the intervention school on different days of the week. The researcher assisted the counselor with implementation of the program as well as provided weekly consultation with the counselor and or teacher as needed. Teachers received handouts with a bulleted list of important concepts from the weekly lessons and were asked to review the skills taught during each session to reinforce concepts from the individual lessons. The degree of teacher involvement varied and although each teacher remained in the room for the majority of the sessions when they were implemented, oftentimes the teachers were completing non-related tasks and preparing for their academic lessons. Immediately at the end of the intervention program, parents who provided consent were sent questionnaires and asked to return them in one week. These parents were again contacted three months following the end of the intervention, unfortunately there were very few parent questionnaires returned and therefore parental reports are not included in this current study. Teachers completed the two questionnaires on each child in their classroom along with a satisfaction questionnaire. Questionnaires were completed in the control school at pre, post, and 3-month follow-up assessment point as well.

### *Course of intervention*

At the intervention school, students participated in the 15-session program with a booster session four weeks after the end of the program. Their parents were invited to attend an informational session and two parent meetings. The program included weekly sessions that were delivered over 20 weeks, each approximately 35-45 minutes, with five weeks missed due to winter break, school closings due to weather, and school crises that the guidance counselor needed to address. The guidance counselor, who was trained in the Fun FRIENDS program, conducted the weekly sessions in each of the classrooms. Sessions were broken down into 10 minute learning activities so that the program components could be reinforced through small group activities. After each session, the guidance counselor completed an adherence checklist assessing how much of the material was covered during that session to assess for fidelity of the program. An independent rater observed three sessions for each of the three classrooms and also completed an adherence checklist. Immediately following completion of the program, teachers, children, and the facilitator completed a satisfaction questionnaire to assess likeability and appropriateness of the program.

### *Parent Groups*

A doctoral level graduate clinician conducted a one hour-long informational session and two hour-long parent groups over the course of the intervention. During these meetings the parents were introduced to the Fun FRIENDS program and provided psychoeducation about anxiety and depression in young children. The first session provided psychoeducation about anxiety and the importance of social emotional skills in young children. A general explanation of the Fun FRIENDS program was given. Any questions and concerns were addressed. The second and

third sessions reviewed specific components of the program and ensured that parents were reinforcing skills and practicing with their children while at home. The goal of the parent sessions was to teach parents effective ways to reinforce their child's use of the skills and to encourage parents to model appropriate behaviors when at home. The goal of the second session was to cover sessions one through six and during the third parent meeting seven through twelve. Parents were given a family workbook, which provided step-by-step instructions for home implementation of the program. Attendance was taken at the parent groups to determine the percentage of parents involved and to what extent parent group participation influences child outcomes. However, and unfortunately, very few parents participated in the groups (Informational Session=8, Parent Session 1=4, Parent Session 2=0). After each weekly classroom session, reminders were sent home to the parents asking that they practice the skills and review activities that were covered in their child's class that week. Prior to the parent meetings, reminders were sent home with the children letting the parents know when the next parent meeting would be.

The informational session was held prior to the start of the intervention. The next parent meeting was held during the second week of implementation of the program in the classrooms and the second meeting was held during the tenth week of the program. Childcare was provided to make it possible for some parents to attend the meeting. During the parent meeting, a 45-minute presentation was given on typical development of young children, protective and risk factors for anxiety, prevalence and treatment of anxiety in young children, and a review of the first 6 sessions of the program. Following the presentation, parents were encouraged to ask questions and share their concerns related to child behavior.

## *Measures*

At the intervention school, teachers completed two questionnaires for each child in their classroom. Teachers were asked to complete two measures assessing child anxiety symptoms and social and emotional strengths and difficulties for each child. Each measure took between 10-15 minutes for teachers to complete. At the control school, teachers completed the same two questionnaires on anxiety symptoms and social and emotional strengths and weaknesses as the teachers at the intervention school.

**Preschool Anxiety Scale, Teacher (PAS-T; Spence, 2004):** The Spence Pre-School Anxiety Scale is a 22-item measure completed by teachers for children between the ages of 3 and 6 based off of the parent version (Spence et al., 2001). The items are rated on a 5-point scale from 0 'not at all' to 5 'very often true. The teacher version does not have any normative data yet; however, it only varies from the parent version by the omission of two items that are difficult to observe in the classroom. This measure is not a diagnostic measure; however, it is used to determine whether children are showing elevated levels of anxiety. It can also be used to evaluate change over time in response to treatment or prevention programs, and to identify children who are at risk of anxiety problems and who many benefit from early intervention. Only the total anxiety score was used in this study. As reported in Edwards, Rapee, Kennedy, and Spence (2010), internal consistency scores for the total score on the PAS-T ranged from  $\alpha = .72-.92$  on the parent measure.

**Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997):** The SDQ is a brief behavioral screening instrument for children between the ages of 4-16. The measure consists of

25 items broken down into five subscales, each consisting of five items. The subscales are: conduct problems, hyperactivity, peer problems, emotional symptoms, and prosocial problems. For the purpose of the current study, only peer difficulties, emotional symptoms, and prosocial problems will be used. Symptom scale items are scored 0 = “not true,” 1 = “somewhat true,” and 2 = “certainly true.” With five items per scale, scale scores can range from 0 to 10. Positive items are reverse coded except for the prosocial scale. Internal consistency for this measure has been reported as excellent for Total Difficulties (0.83) and Impairment scores (0.80), good to excellent for four subscales (0.63–0.77), and fair (0.46) for peer problems (Bourdon et al., 2005).

**Program Adherence Checklist:** This checklist assessed the integrity of the program by monitoring how much of the program was implemented during each session. The facilitator and the undergraduate assistant completed this checklist. The undergraduate assistant observed 20% of the total number of sessions and determined how much of the program was being administered during those sessions. This adherence checklist was adapted from one used in the preliminary studies of the Fun FRIENDS program and included aims and activities for each session (Pahl & Barrett, 2009).

**Satisfaction Questionnaire:** Three satisfaction measures were designed for this study: a child satisfaction measures, a facilitator (guidance counselor) satisfaction measure, and a parent satisfaction measures. These measures were modeled after the ones utilized in Pahl and Barrett’s (2009) preliminary study using the Fun FRIENDS program. Each measure contains 10-items, each of which are answered using a Likert scale ranging from 1 to 3. The child version includes smiley face pictures to help the child provide a more accurate answer. Representative items from

the child version include “How much did you like the milkshake breathing and the red and green thoughts” and “Would you tell a friend they should go to the Fun FRIENDS program?”

Representative items from the 10-item teacher version include “How successful do you think this program was in teaching your child to be brave?” This measure was used to obtain a measure of satisfaction with the program as well as outcomes associated with the program.

### *Intervention Description*

The main goal of the Fun FRIENDS program (Pahl & Barrett, 2007) is to not only increase social emotional competence and decrease the amount of worry and stress experienced by children between 4 and 7 years of age but also to improve school performance. This school-based program is a downward extension of the FRIENDS program; hence, it has been developmentally tailored to be appropriate for use with preschool and early elementary aged children in the classroom. There is a strong emphasis on play activities and experiential learning to keep children engaged and to increase the effectiveness of the program. In targeting several areas of social emotional learning, such as emotion regulation, empathy training, self-esteem, and prosocial skills, this program also uses cognitive behavioral strategies (cognitive restructuring, exposure to fears, and relaxation) to teach these skills to children. As noted earlier, many of the evidence based treatments for childhood anxiety incorporate a cognitive behavioral component, which has been shown to be an effective treatment strategy (Cartwright-Hatton, Roberts, Chitsabesan, Fothergill, & Harrington, 2004; Ollendick & King, 2012). This school-based program can be effective for young children and serves to provide skills to these children that will hopefully protect them from developing future anxiety problems and improve their school performance.

This study assessed the feasibility of utilizing this program during the school's regularly scheduled guidance period. The program was administered weekly, over 20 weeks (15 sessions) during each classroom's guidance period time and activities were broken up during the 35-40 minute sessions. Any activities not completed during the session were then completed during the next session. During some weeks, the session was cancelled due to a student crisis, school closing due to weather, or the guidance counselor's absence. Sessions with more activities to complete were broken up into two separate sessions to ensure adequate coverage of all of the material. The aims for the 15 sessions are outlined in Appendix 1.

### *Control School*

The guidance counselor at the control school provided guidance sessions as she normally would throughout the year to the kindergarten classes. During the guidance period, the following topics were covered: tolerance, responsibility, and safety, respect/caring, manners, bullying, friendship, trustworthiness, conflict resolution, career exploration, emotions, and study skills. The order of the topics changed depending on what was happening at the school. The control school was in the same district as the intervention school and there were no known differences in child demographics (i.e., race or gender).

### *Treatment Adherence*

The facilitator and independent rater completed weekly treatment integrity checklists to measure adherence to the manual. Treatment sessions could not be recorded, as they took place during regular class time. However, 25% of the sessions were randomly selected for observation and coded for adherence. The sessions were rated using a treatment integrity checklist to indicate compliance with the manual content for each session. The integrity checks showed 89.7

concordance between session and manual content. Furthermore, interrater agreement on session content was high ( $\alpha = .97$  (ICC),  $\kappa = 81\%$  (almost perfect agreement range)).

### *Missing Data Analysis*

The data were screened for completeness, the presence of outliers, and violations of the assumptions of analyses of variance and multiple regression procedures. Little's Missing Completely at Random (MCAR) test was completed in SPSS to ensure that the missing data obtained on each scale at each time point was completely at random. At pre, there were no missing data on the teacher report SDQ and Spence for the intervention school. However, for the control school, the MCAR test for SDQ data was significant ( $\chi^2=70.57$ ,  $DF= 48$ ,  $p=.019$ ). Noteworthy, there were only two values that were missing. At post, results of the MCAR for the control school suggested that data were missing completely at random on the SDQ ( $\chi^2=40.33$ ,  $DF=41$ ,  $p=.50$ ). There was no missing data on the SCAS. There were no missing teacher data for the intervention school at the 3-month post time point. All items were completed on the SDQ, as well as the PAS. MCAR test results for the control school at the 3-month follow up suggested that the data were missing at random (PAS collected at the 3-month post follow-up ( $\chi^2 = 42.566$ ,  $DF=41$ ,  $p= .404$ )). There were no missing data on the SDQ for the control school.

## **Results**

### *Descriptives*

Means and standard deviations for study variables are listed in Table 1 for both the intervention and the control school. Additionally, reliabilities for the PAS-T and subscales from the SDQ for each school are also listed in Table 1. Reliabilities for the teacher version of the PAS-T were in the good to excellent range for the intervention and control schools, respectively

( $\alpha = .90$ ;  $\alpha = .88$ ) suggesting that the internal consistencies of this measure were acceptable.

Internal consistencies for the subscales of the SDQ varied (see Table 1), ranging from poor to good for each school. Reliabilities for this sample were similar to those reported in Bourdon et al. (2005). Means and standard deviations of scores on the SDQ and PAS-T at all assessment points for each school are reported in Table 2.

Preliminary analyses were conducted to ensure that the two groups (intervention/control) of participants did not differ from one another on any of the pretreatment measures. Comparisons across groups using one-way ANOVAs to determine whether there were differences between the two schools on anxiety symptoms or scores on the SDQ revealed no significant differences between the pre-intervention means on the PAS-T [ $F(1,109) = .50, p = .48$ ] or the SDQ [ $F(1, 109) = .83, p = .35$ ].

The sample was divided into high and low risk groups based on pre-anxiety scores on the teacher reported PAS-T. Children who scored in the top third percentile range were grouped into the “high-risk” group, whereas the rest of the children were in the “low-risk” anxiety group based on symptomatology. For the intervention school, there were 22 children in the high-risk group and 36 children in the low risk group. Similarly for the control school, there were 17 children in the “high-risk” group and 35 in the “low-risk” anxiety group. Paired sample t-test and one-way ANOVAs were conducted to look at group differences on anxiety and social emotional scores.

### *Correlations*

Pearson R correlations were conducted to determine the relationship between child anxiety symptoms, emotional symptoms, prosocial skills, and peer difficulties. Additionally, correlations between age, gender, and anxiety are reported (see Table 3). Results for the whole

sample at pre indicated that child age and gender were not significantly correlated with anxiety or any of the SDQ subscales. Given that gender was not correlated with any of the variables, separate correlation tables are not presented. Anxiety symptoms were significantly and positively correlated with emotional symptoms on the SDQ ( $r = .67, p < .001$ ), suggesting that children experiencing more anxiety symptoms also had more emotional symptoms, according to teacher report. Additionally, anxiety was positively related to peer difficulties, whereby children with more anxiety symptoms were reported to have greater peer difficulties ( $r = .21, p < .05$ ). Teacher reported total difficulties on the SDQ were positively correlated with anxiety symptoms ( $r = .32, p < .02$ ). As expected, several scales on the SDQ were significantly related, such that peer difficulties were significantly correlated with emotional symptoms ( $r = .22, p < .05$ ) and prosocial skills ( $r = -.62, p < .001$ ), with greater peer difficulties suggesting more emotional symptoms and fewer prosocial skills.

## **Between Group Comparisons**

### *Changes in Anxiety Symptoms*

Several 3 (time: pre, post, 3-month) x 2 (condition: intervention vs. control) x 2 (low-risk vs. high-risk) mixed between subject ANOVAs were performed using teacher report to investigate the impact of the intervention. The within subject factor was time and the between subject factors were condition and anxiety risk. On the teacher report PAS-T, a significant main effect for time was found [ $F(1, 105) = 5.18, p = .006$ ] with a small effect size (partial  $\eta^2 = .05$ ), indicating that anxiety scores decreased over time for both groups (See Figure 2). Within-group post hoc analyses indicated that anxiety scores for the whole sample decreased from pre to post ( $M_1 = 8.46, SD = .56$  and  $M_2 = 6.6, SD = .82$ , respectively).

There was a significant main effect for condition [ $F(1, 105) = 14.7, p = .010$ ] with a

moderate effect size (partial  $\eta^2 = .12$ ). Furthermore, there was also a significant interaction between condition and time [ $F(2, 210) = 4.08, p = .02$ ] with a small effect size (partial  $\eta^2 = .04$ ). Anxiety scores significantly decreased for the control school from pre to post ( $M=6.1, M2=2.7$ ) and continued to decrease at follow-up ( $M3=1.7$ ); however, anxiety scores increased in the intervention school from pre ( $M=7$ ) to post ( $M2=9.3$ ) and then significantly decreased at follow-up ( $M=5.6$ ); however there were no significant pre to follow-up changes in anxiety symptoms. Moreover, anxiety scores were significantly different between the intervention and control school at post, with scores in the intervention school ( $M2=9.3$ ) significantly higher than scores in the control school ( $M2=2.8$ ).

On the teacher report PAS-T, there was a significant main effect of time for children in the high and low risk groups [ $F=16.38, p = .00$ ], demonstrating a large effect size (partial  $\eta^2 = .14$ ), suggesting that anxiety scores significantly changed across time (see Table 4). There was also a significant main effect for anxiety risk, [ $F(1, 105) = 34.89, p = .00$ ], suggesting significant differences in anxiety scores for each of the risk groups. Anxiety scores significantly decreased for children in the high-risk group, whereas there were no significant changes for those children in the low risk group across time. Additionally, there was a significant interaction between time and risk group [ $F=35.90, p = .00$ ] with a large effect size (partial  $\eta^2 = .26$ ). Figure 3 shows the interaction between the low and high-risk anxiety groups in the intervention group.

#### *Changes in Total Symptoms on the SDQ*

A 3 (time: pre, post, 3-month) x 2 (group: intervention vs. control) x 2 (anxiety: low-risk vs. high-risk) ANOVA was conducted to determine changes in the socio-emotional scores from the SDQ. There was a significant linear main effect for time [ $F(1, 106) = 17.01, p = .001$ ] with a

large effect size (partial  $\eta^2 = .14$ ) indicating that total difficulties for both the intervention and control groups on the SDQ significantly decreased. There was also a significant linear main effect of time for the low/high-risk anxiety groups [ $F=17.63, p=.00$ ] with a large effect size (partial  $\eta^2 = .15$ ) indicating that SDQ total scores significantly changed across time the risk groups. Table 5 reports the results of the ANOVA demonstrating a significant main effect of time for all children [ $F(2, 208)=10.77, p=.00$ ] with a medium effect size (partial  $\eta^2 = .09$ ), suggesting total difficulties decreased across time.

#### *Changes in Emotional Symptoms*

There was a significant linear main effect for time [ $F(1, 106)= 8.4, p=.004$ ] with a medium effect size (partial  $\eta^2 = .07$ ) with no main effect for condition indicating that the emotional symptoms score for the intervention and control group significantly decreased over time. Similarly, there was a significant linear main effect of time for the anxiety risk groups [ $F(1, 106)= 21.06, p= .000$ ] with a large effect size (partial  $\eta^2 = .17$ ). There was also a significant main effect of risk status [ $F(1,106)=11.11, p=.001$ ] with a medium effect size (partial  $\eta^2 = .10$ ). The interaction between time and risk group was significant [ $F=28.29, p=.000$ ] with a large effect size (partial  $\eta^2 = .21$ ). Figure 4 illustrates the significant interaction.

#### *Changes in Peer Difficulties*

There was a significant linear main effect for time [ $F(1, 106)= 12.8, p=.001$ ] with a medium effect size (partial  $\eta^2 = .11$ ) with no main effect for condition indicating that scores on the peer difficulties subscale for both the intervention and control groups significantly changed over time. Noteworthy, peer difficulties at post were significantly different between groups, with

children in the control school ( $M=1.04$ ,  $SD=1.56$ ) demonstrating more peer difficulties than children who received the intervention ( $M=.48$ ,  $SD=.78$ ).

### **Within Group Changes**

#### *Socio-emotional Changes from pre to post*

Results of paired samples t-tests demonstrated that there were no significant changes from pre to post on any of the socio-emotional subscales of the SDQ for the control school. However, for the intervention group, there were significant decreases in peer problems ( $t(57)=4.45$ ,  $p<.001$ ) and total difficulties ( $t(57)=2.23$ ,  $p<.05$ ) from pre to post. Results for the intervention group are reported in Table 6.

#### *Socio-emotional changes from post to follow-up*

For both the intervention and control groups, there were no significant post intervention to follow up changes on the socio-emotional variables.

#### *Socio-emotional changes from pre to follow-up*

For the intervention group, peer difficulties ( $t(57)=2.62$ ,  $p=.011$ ) significantly decreased from pre ( $M=1.57$ ,  $SD=1.87$ ) to follow-up ( $M=.71$ ,  $SD=2.41$ ) and total difficulties ( $t(57)=2.27$ ,  $p=.027$ ) significantly decreased from pre ( $M=8.17$ ,  $SD=6.06$ ) to follow up ( $M=5.62$ ,  $SD=5.55$ ). The control group evidenced significant changes in emotional symptoms ( $t(49)=2.56$ ,  $p=.014$ ) from pre ( $M=1.70$ ,  $SD=2.00$ ) to follow-up ( $M=.84$ ,  $SD=1.58$ ). There were also significant changes in peer difficulties ( $t(49)=2.52$ ,  $p=.015$ ) from pre ( $M=1.58$ ,  $SD=1.55$ ) to follow-up ( $M=.82$ ,  $SD=1.34$ ). Lastly, there were significant changes in total symptoms

( $t(49)=3.63, p=.001$ ) with scores decreasing from pre ( $M1=9.5, SD=6.15$ ) to follow-up ( $M3=5.54, SD=5.33$ ).

### *High/Low Risk Group Comparisons*

#### *Intervention School*

For the intervention school, the low-risk group demonstrated a significant increase in anxiety symptoms from pre ( $M=1.39, SD=1.99$ ) to post ( $M=6.75, SD=5.38$ ) assessment ( $t(35)=-7.82, p=.000$ ). Children in the low-risk group also demonstrated a significant decrease in peer difficulties from pre ( $M=1.5, SD=1.89$ ) to post ( $M=.33, SD=.68$ ) assessment ( $t(35)=3.86, p=.000$ ). However, for children in the high-risk group, there was a significant decrease in anxiety symptoms ( $t(21)=3.5, p=.002$ ) from post ( $M2=13.57, SD=15.29$ ) to follow-up ( $M3=3.43, SD=4.58$ ). Figure 3 demonstrates changes in anxiety symptoms for both the high and low risk anxiety group within the intervention group. There was also a significant decrease in peer difficulties from pre ( $M=1.68, SD=1.94$ ) to post ( $M=.73, SD=.88$ ) assessment ( $t(21)=2.28, p=.033$ ). Additionally, for the high-risk group, there was a significant decrease in emotional symptoms from post ( $M=2.64, SD=3.01$ ) to follow up ( $M=.64, SD=1.72$ ) assessment ( $t(22)=3.09, p=.006$ ). Lastly, there were also significant decreases in total difficulties on the SDQ for the high-risk group from pre ( $M=9.73, SD=5.15$ ) to post ( $M=6.55, SD=4.41$ ) assessment ( $t(22)=2.63, p=.016$ ).

#### *Control School*

For the high-risk group in the control school, there were significant decreases in anxiety from pre ( $M=13.71, SD=7.94$ ) to post ( $M2=3.81, SD=4.83$ ) assessment ( $t(16)=5.28, p=.000$ ). There were significant decreases in emotional symptoms in the high risk group from pre ( $M=3.35, SD=2.12$ ) to post ( $M2=.88, SD=1.73$ ) assessment ( $t(17)=3.66, p=.002$ ). There were

also significant decreases in total difficulties between pre ( $M=11.65$ ,  $SD=4.80$ ) and post ( $M=6.88$ ,  $SD=6.01$ ) assessment ( $t(16) = 2.42$ ,  $p=.028$ ). Although not significant, emotional symptoms slightly increased in the high-risk group from post to follow-up. There were no significant changes on any subscale of the SDQ for the low-risk group in the control school. The above listed results for the control and intervention school are displayed in Table 7.

## **Group Comparisons of Behavioral and Academic Markers**

### *Behavioral*

One-way ANOVAs were conducted to determine group differences in behavioral, academic, and attendance markers from pre to post intervention assessment time points. General behavioral markers for the kindergarteners included three teacher reported items from their report cards: 1) Demonstrates self-control with others; 2) Plays and works well with others; and 3) Gives best effort. There was a main effect for time [ $F(1, 106)= 3.9$ ,  $p=.05$ ] suggesting scores significantly changed from pre to post intervention. There was a small effect size (partial  $\eta^2 = .04$ ). However, there was also a significant interaction between time x group [ $F(1, 106)= 6.38$ ,  $p=.013$ ], indicating that the differences between behavioral scores at pre and post were only significant for one group with a medium effect size (partial  $\eta^2 = .06$ ). Further inspection showed that positive behaviors from pre to post assessment significantly decreased for the control school; however there were no significant changes in behavior scores for the intervention school (see Figure 5). Although scores significantly declined for the control school, there was not a significant difference between the two schools in their post intervention scores. There were no significant gender differences on positive behavior markers from pre to post intervention.

## *Academic*

Academic ratings were obtained from the Phonological Awareness Literacy Screening (PALS) assessment that Kindergarteners take at the beginning and end of the school year. Results of analyses suggested that scores on the academic benchmark question at pre and post intervention were significantly different for the intervention and control school. Furthermore, there was a significant main effect for time [ $F(1, 102)= 401.98, p=.00$ ], demonstrating an increase in scores from pre to post for both schools. There was a large effect size (partial  $\eta^2 =.80$ ). Mean differences between the two schools suggested that scores in the control school were significantly lower at pre ( $M1=47.88$  vs.  $M1=59.15$ ) and significantly higher at post ( $M2=94.76$  vs.  $M2=86.31$ ) than scores from children in the intervention school. There were no significant gender differences in academic results from pre to post intervention.

## **Satisfaction Results**

Following the last session of the program, satisfaction measures were completed by the children ( $n=57$ ), facilitator ( $n=1$ ), and teachers from the intervention school ( $n=4$ ). The satisfaction measure consisted of 10 questions for each measure, rated on a 3-point likert scale, assessing validity of the program, likeability of the skills, and relevance of the program. The Fun FRIENDS program received positive evaluations from the children, teachers, and the guidance counselor. General satisfaction for the children was 85% and satisfaction for the teachers was 93% (See Figure 6). Furthermore, as demonstrated in Figure 7, children were asked what part of the program they enjoyed the most and results were as follows: 39% of the children listed thought identification/challenging (i.e., helpful/unhelpful thoughts) as the most enjoyable aspect of the program, 36% of the children listed learning about relaxation methods as the most enjoyable (i.e. milkshake breathing), and 25% of the children enjoyed learning how to be a good

friend and related social skills (i.e. helping, listening, sharing, and empathy skills).

## **Exploratory Analyses**

### *Prosocial and Total Peer Difficulties as Moderators*

Separate regression analyses were completed to examine the role of peer difficulties and prosocial skills as moderators of the relationship between pre and post intervention anxiety symptoms. Regression results indicated that neither peer difficulties nor prosocial skills moderated the relationship between pre anxiety symptoms and post intervention anxiety for the control group. However, for the intervention group, prosocial skills ( $b=-.26$ ,  $t= -3.9$ ,  $p=.00$ ) was a significant moderator between pre and post anxiety symptoms. Peer difficulties were not a moderator of this relationship. The relationship between pre and post anxiety was strongest for children with fewer prosocial skills. Further analyses of peer difficulties and prosocial skills as moderators of the relationship between pre and follow up anxiety did not yield significant findings for either group.

## **Discussion**

The purpose of this study was threefold: to explore the relationship between social skills, emotionality, and anxiety symptoms; to determine the feasibility of implementing a school-based universal anxiety prevention program with kindergarten children; and to determine the effectiveness of implementing the Fun FRIENDS intervention when compared to a control group who did not receive the intervention. The program aimed to decrease current and prevent future anxiety symptoms in young children by building protective skills, such as social skills and

emotion regulation skills, and utilizing CBT techniques to help children identify unhelpful thoughts and learn anxiety management skills. Regarding the first objective, results indicated that anxiety symptoms were positively related to emotional symptoms, peer difficulties and total difficulties on the SDQ for all children. Prosocial behaviors were negatively related to peer difficulties and total symptoms on the SDQ. Furthermore, emotional symptoms were positively related to peer difficulties for children in the control school, but not in the intervention school. These findings are similar to those found in previous research and suggest that social and emotional difficulties are related to anxiety in children (see Aviles, Anderson, Davila, 2005; Denham, 2006).

Secondly, regarding the feasibility of implementing this prevention program in a rural school setting, only slight modifications were necessary in order to cover the contents of the program. Sessions were shortened in length (from 45-60 minutes to 35-40 minutes) to fit into the school guidance period and the 12-session program was extended to 15 sessions. Although all session content was covered, there seemed to be limited generalizability within the school and home environment. Unfortunately, parental involvement was extremely limited and, as a result, children may not have been reviewing or using the learned concepts at home. Furthermore, the intervention program was implemented in the classrooms, but reinforcement of skills did not occur outside of the kindergarten wing of the school. Additionally, the guidance counselor indicated that she had limited time to prepare sessions due to her other school related obligations. When considering how to implement these programs with fidelity over time in schools, it seems as though it is helpful to have trained “consultants” to address concerns and help motivate the counselors. During the debriefing interview, the guidance counselor noted the follow: “Having someone else here with me weekly [graduate student] made me more motivated/pressured to

follow program exactly how it should be.” However, she also stated that, “The inconsistency of a school day makes it [implementation] quite challenging. The counselor may miss sessions and have other things to take care of.” Generally, the counselor liked the contents of the program and felt that she would use parts of the program in her future sessions, but thought it would be highly unlikely that she would be able to use the whole program due to time constraints and other demands related to her role in the school. The Fun FRIENDS program is user-friendly and easy to implement, but does require significant preparation and planning and perhaps would work better if implemented by classroom teachers, as they could incorporate it into their daily lesson plans.

Lastly, the study sought to assess change in anxiety and social emotional skills at post-intervention and follow-up assessment periods (3-months). Children in both the intervention and control schools showed a significant change in anxiety symptoms from pre to follow-up, with anxiety symptoms initially increasing in the intervention school (although not a significant increase) and decreasing in the control school from pre to post. Anxiety symptoms in both groups significantly decreased from post-intervention to follow-up assessment periods. Both groups also showed a significant decrease in anxiety symptoms from pre to follow-up, suggesting that anxiety symptoms in the kindergarteners positively changed across time. Anxiety symptoms were significantly different between the two groups at post intervention and follow-up, with the teachers in the control school reporting fewer anxiety symptoms than teachers in the intervention school. Another supportive finding was the decrease in positive behaviors reported by teachers in the control school from pre to post. There was a significant interaction, as scores on the positive behavior indicators decreased from pre to post, but only for children in the control group. Scores for children in the intervention group slightly increased (although not

significantly) suggesting a positive effect of the intervention on maintaining adaptive positive behaviors.

High and low-risk group comparisons suggested some benefit for the children in the intervention group. Results demonstrated significant decreases in emotional symptoms and anxiety symptoms from post to follow-up assessment periods, perhaps supporting the idea that effects of prevention programs may be delayed. The changes in anxiety were not found in the low-risk group or for children in the control school. Instead there were significant increases in anxiety in the control school for the low-risk group. Despite the significant increase in anxiety symptoms in the control school, given that the scores are so low, it may be likely that overall scores were regressing towards the mean. There was also a significant decrease in emotional symptoms for children in the high-risk anxiety group in the control school but not the low risk group. Both the control and intervention group demonstrated a significant decrease in peer difficulties from pre to post; however, at post children in the intervention school had significantly fewer peer difficulties suggesting a positive intervention effect on social skills. Risk analyses found significant decreases in peer difficulties, only for the high-risk group in the intervention school.

The findings related the initial increase of anxiety symptoms in the intervention school were unexpected, given the prior literature reporting positive effects of intervention programs. However, results from a previous trial of the Fun FRIENDS program did not obtain significant effects until the 12-month follow up period (Pahl & Barrett, 2010). Notably, a common finding obtained in prevention related research trials research is non-significant differences between the intervention and control school from pre to post intervention (Miller, Short, Garland, & Clark, 2010). This may be the case for the current research as well; however we have several

hypotheses regarding our results. As a universal prevention program, one would not expect significant differences immediately following the intervention. Results from this study only present data from 3-months following the intervention; meta-analysis data provide stronger effect sizes for 6-12 month follow up in youth. Research has demonstrated that prevention effects are often delayed until follow-up assessment periods (Greenberg, Domitrovich, & Bumbarger, 2001). Therefore, it will be interesting to look at the long-term effects of the intervention on children over the next year. Furthermore, children in the current study were not selected for having preexisting problems, as this was a universal trial. Consequently, significant differences are hard to find when there is little room for change regarding symptoms. A majority of the children in the study had very few anxiety symptoms, as average anxiety scores on the teacher version of the Preschool Anxiety Scale (PAS) were low. A better indicator of whether the intervention had a significant effect for the children may be to take a closer look at significant changes in peer difficulties and emotional symptoms. Results suggested the intervention had a positive effect, because there were significant differences in peer difficulties at post with the intervention group exhibiting fewer peer difficulties. Perhaps the measures utilized were not the best measures to capture significant change in the positive coping skills taught throughout the intervention.

There are several studies that suggest indicated (as compared to universal) programs are the most effective in the school environment (Calear & Christensen, 2010). This is not to say that this universal program is not effective; rather it may be best utilized as an indicated intervention for children experiencing high levels of anxiety symptoms in order to obtain greater effect sizes. Studies that have failed to find significant differences in universal trials suggest that the dose and strength of the program may not be adequate for students presenting with moderate to low

anxiety symptoms. In the current study, although all components of the program were implemented, due to time constraints, it is likely that the children did not receive an adequate dose of the intervention in order to demonstrate significant gains. Due to the school schedule, sessions were 35-45 minutes weekly; however, some sessions were cancelled due to crises and were spread out across time reducing the intensity of the program. It is likely that a stronger “dose” of the program is needed for significant change. A general learning assessment at the end of the intervention may have helped to determine how much of the intervention the children actually remembered. Although teachers remained in the room during the guidance period implementation of the program, it is unclear whether use of all of the strategies taught was reinforced in the classrooms. Universal programs are generally taught in large groups and therefore may be less intensive when compared to programs administered to targeted populations.

Another consideration is the validity of teacher reported anxiety in young children. It is likely that after learning about the Fun FRIENDS program and paying more attention to anxiety in their students, teachers provided a more accurate report of anxiety and as a result scores increased, for children in the intervention school, following the intervention. Teachers in the control school generally reported little anxiety in their students, as the standard deviation of anxiety in the control school was less than that of the intervention school; it is also possible that there was some bias in reporting.

A third area of consideration is the level of parental involvement in the program. There have been mixed findings regarding the benefit of parental involvement for clinically anxious youth, with some studies showing positive results and other indicating no difference between child alone and child plus parent treatment groups (Barrett et al., 1996; Kendall, Hudson, Gosch,

Flannery-Schroeder, and Suveg, 2008; Spence, Donovan, Brechman-Toussaint, 2000; Wood, Piacentini, Southam-Gerow, Chu, and Sigman, 2006). Rapee et al. (2010, 2012) have documented the value of parent involvement in treatment, especially for younger children. In the current study, parents were invited and encouraged to attend the parent sessions; however, overall attendance was poor. Parents who did not attend the meeting most likely did not learn the skills needed to adequately participate in the program with their child. It is recommended that future studies make a huge push for parental involvement and determine the impact of parent participation on intervention outcome, as this may be an extremely important part of treatment of anxiety in young children. Parent meetings held at child drop-off or pick-up times may increase the likelihood of parental attendance to the meetings. Parent meetings for the current study were held in the early evening when after school activities were completed. Although childcare was provided, perhaps it was too late in the evening (dinner hour) for parents to come back to the school. Moreover, the school was located in a rural part of Virginia, so it may have been that parents had to travel a significant distance to get to the school for the meeting and it was inconvenient.

The inclusion of parents in the prevention and treatment efforts of child anxiety disorders is an important variable to consider. Barrett et al. (1996) compared a family focused CBT treatment program with a CBT group treatment that did not involve parents and results yielded positive effects of having parents participate in treatment. Other research has targeted the parents of at-risk children with the aim of preventing future anxious symptomatology and results showed decreases in child behavior inhibition and changes in parenting behaviors that are related to child anxiety (Kennedy et al., 2009; LaFreniere and Capuano, 1997; Rapee et al., 2010; Rapee & Jacobs, 2002). These findings support the notion that it is beneficial to have parents involved in

the treatment of childhood anxiety, especially with younger children. Further research with at-risk youth demonstrates that providing treatment to anxious parents of young children reduces the risk of these children developing later anxiety disorders (Hudson & Dodd, 2012; Rosenbaum et al., 2000). A small-scale research study demonstrated significant decreases in behavioral inhibition in young children following parent participation in a parent-focused intervention (Rapee & Jacobs, 2002). Interestingly, improvements in child inhibition were reported despite the child not directly being involved in the treatment program. Parents were educated about anxiety and how best to deal with their child's anxiety symptoms during the intervention. Furthermore, the program helped parents manage their own anxiety, which influences parenting style and how the parents model appropriate ways to deal with anxiety. Further research by Rapee et al. (2010) demonstrated that a brief parent focused intervention can alter the trajectory of anxiety in young at-risk children. Therefore, it can be hypothesized that prevention and intervention programs can prove to be beneficial when they target or include parents. Unfortunately, we had very low parent participation in this school-based intervention.

Findings from Rapee and Jacobs (2002) as well as Edwards et al. (2010) highlight the importance of identifying risk factors of child psychopathology and point to the promise that prevention programs involving parents can have on the developmental trajectory of anxiety in children. Tracking the developmental pathway of anxiety in young children is a complex and challenging task; however, it is important that research identify individual specific as well as environmental risk factors.

Etiological models and literature reviews of childhood anxiety point to the importance of the interplay between child temperament and individual factors with environmental risk factors, including parenting (Degnan, Henderson, Fox, & Rubin, 2008; Hudson & Rapee, 2004; Vasey &

Dadds, 2001; Bronfenbrenner & Ceci, 1994). Research presented by Hudson et al. (2011) has demonstrated that despite many levels of influence on child anxiety, the strongest predictor of later anxiety symptoms were child symptoms and temperament. Therefore, it is still important to measure anxiety in young children and provide selective interventions to children demonstrating higher levels of anxiety.

An additional finding from the current study was that prosocial skills moderated the relationship between anxiety symptoms at pre and post intervention, with the relationship between pre and post anxiety being strongest for those children with fewer prosocial skills. These findings speak to the importance of building protective factors, like social skills and emotion regulation in children. Furthermore, these moderators were not found to be significant in the control group suggesting that the central focus on social skills and emotion management in the intervention are important components to the program. Earlier research by Perren, Stadelmann, von Wyl, and Klitzing (2007) found that Kindergarten children with low levels of emotional symptoms and high levels of pro-social behavior at age 5 had the lowest level of emotional symptoms at age 6. However, children with above average levels of emotional symptoms and above average levels of pro-social behavior at age 5 demonstrated the highest levels of emotional symptoms at age 6. Above average prosocial behavior may be maladaptive, in that children may become too concerned with the welfare of others and increase their own emotional symptomatology. There seems to be an optimal level of prosocial behavior necessary for positive outcomes.

Noteworthy, was the significant decrease in positive behaviors in the control group. There were no significant differences at pre between the two groups on teacher reported behavioral indicators; however, following the intervention there was a significant decrease in

positive behaviors for children in the control school; whereas there was a slight increase in positive behaviors in the intervention school, suggesting that the intervention program helped to maintain positive behaviors in the kindergarten children. Future research should measure adaptive behaviors as well as anxiety symptoms over time to better identify the trajectory of positive behaviors and anxiety symptoms in non-disordered children.

Given that this is prevention research and long-term outcomes need to be pursued, only speculative statements can be made regarding the early effectiveness of this program. Horowitz and Garber (2006) state that universal programs often yield small effect sizes; although, there were a range of effect sizes in the current study it is still important to consider that large scale prevention programs may not report large effect sizes but that does not mean there aren't significant gains. Important socio-emotional skills were taught that are related to anxiety as well as other forms of psychopathology. Developmental theory has provided an important framework for prevention work; however the complexity of developmental pathways provides a challenge for the field. Although the focus of the program was on anxiety, the risk and protective factors targeted may predict multiple outcomes and therefore it is extremely important to implement these programs regardless of whether there is an immediate influence on targeted symptoms. Given the moderation finding above, it may be that targeting prosocial skills in youth is of greater importance in preventing later increases in anxiety symptoms. It is essential that research seek to specify links between protective factors, positive outcomes, and reduction of problematic behaviors (Greenberg et al. 2000).

Prevention programs do not fall in the same category as treatment or maintenance programs. Prevention programs not only aim to prevent psychopathology symptoms, but also to promote healthy developmental outcomes. It may be that prevention programs have the power to

steer groups into positive trajectories and long-term outcomes will point to intervention groups demonstrating greater positive skills. For the current research, along with decreases in anxiety symptoms, decreases in peer difficulties and emotional symptoms and maintenance of positive behaviors are suggestive of positive program effects. Essentially, with prevention programs, there is must be a focus on resiliency and goals to increase positive behaviors. In a review of prevention programs, Greenberg et al. (2001) reported that short-term preventive interventions may be best directed at risk and protective factors and focus on multiple domains. These programs need to focus not only on the child, but the school and family contexts to ensure generalization and sustainability of effects. They also note that schools are a great venue to implement fully integrative models (Greenberg et al., 2000). That said, it is necessary that further research be conducted to determine long-term effectiveness and to identify more efficient ways to deliver this intervention.

### *Limitations*

There are several limitations of the current research study that need to be noted. First, the small sample size reduced power to detect overall intervention effects in terms of general outcomes. Large-scale effectiveness trials of school based anxiety interventions for young children are needed to help determine whether anxiety symptoms can be decreased and future anxiety prevented. Furthermore, larger samples are required to determine changes in socioemotional skills and to differentiate between normal development and positive effects of an intervention. Second, findings are limited in their generalizability, as the sample was primarily Caucasian, and took place in two rural elementary/middle schools. Although the sample was reflective of children in the general area of Southwest Virginia, generalizability to ethnically and regionally diverse samples is limited. Third, parental involvement was minimal and did not

provide a good measure of parental influence. Furthermore, very few parents completed the questionnaires sent home; therefore, the data collected was limited in terms of the statistical analyses that could be completed. Fourth, there were several difficulties encountered at the school, which likely compromised the quality and dose of the intervention the children received. Such that, the guidance counselor who delivered the intervention was also responsible for academic records and testing, crisis intervention and prevention work, and working with parents, and these competing demands made it difficult for the counselor to take advantage of the supervision offered and greatly reduced preparation time for weekly sessions. Fifth, there was only one facilitator and only kindergarteners participated in the study; therefore, moderators of intervention outcome, such as provider background and age/developmental timing were unable to be explored. Fiask et al. (2011) suggest these may be important variables to consider in future prevention work, especially with newer programs where potential moderators are unknown. Lastly, and perhaps most importantly, the measures utilized in this study may not have been the best measures to capture changes in targeted behaviors. Primarily, there is no normative data or factor loadings for the teacher reported PAS-T. Therefore, the measure is limited in its' clinical utility until these norms are established and results should be interpreted with caution. Additionally, the emotion subscale on the SDQ was highly correlated with the total anxiety score from the PAS-T and therefore another measure of emotional symptoms in children should have been used to capture other behaviors. As with many research studies, there are many limitations that may influence study findings; however, for this study, the strengths of the study outweighed the highlighted challenges.

## Clinical Implications and Future Directions

Greater attention to school-based CBT is necessary with younger children, for whom the efficacy of CBT is still being determined. There is an underrepresentation of young children (<7) in studies of CBT protocols for the treatment of anxiety in the school environment. Furthermore, there are even fewer studies specifically targeting prevention for this population. In order to improve dissemination, it is necessary to adopt a flexible cognitive behavioral approach in order to ensure best practices and program effectiveness in schools. The major goal is to move the efficacy findings from controlled clinics to demonstrate the effectiveness of these programs in community settings such as schools. This research yields positive findings regarding the transportability and feasibility of successful implementation of a universal prevention program for young children. Per the facilitator, the program components are highly applicable and useful in the classroom context. The challenge is integrating programs in the school day in such a way that: (1) they are not interfering and detracting from academic learning, (2) an adequate amount of exposure is given so that the children learn the skills and have ample time to practice, and (3) they involve parents and target multiple systems in a child's life. Further research should explore implementation of 12-week interventions being delivered over the course of the school year and measure later prevention effects. Since these are preventative interventions, there is less urgency in delivering the intervention within a specific timeframe. However, for positive effects of programs, research needs to identify a "specific" dose and timeframe. Research by Denham and Burton (1996) demonstrates positive effects of an intervention program for at-risk youth spread across 32 weeks. Children identified as "high-risk" and exhibiting above average anxiety or showing deficits in socioemotional skills may then need to receive more intensive services but research comparing several intervention condition needs to be conducted.

For this particular study, the benefit of introducing the anxiety prevention program in the school is that it increased awareness of anxiety symptoms in children. Parents and teachers were more aware of potential difficulties their child was experiencing due to anxiety. Teachers were more observant of children in their classrooms who may not have been presenting with behavioral challenges, but rather was struggling with peer interactions and emotion control. Given the trend in our data, it is very likely that teachers exposed to the anxiety prevention program were more attuned to anxious behaviors in their children and this may be reflected in the increased anxiety scores following the intervention. Preventative interventions can help to identify children at-risk for later anxiety and related difficulties as well as children in need of social skills and emotion regulation training.

Generally speaking, it is important to consider several factors of program implementation in school-based mental health, such as the school culture, identification of students and issues of confidentiality, cost-effectiveness, and service providers. The significant relations between teaching and learning in school and socio-emotional health must be highlighted in order to ensure that children are flourishing in the school environment (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Therefore, this research yields useful findings for the field of child mental health as well as the field of early childhood learning and education.

As noted in the limitations, the small sample size and restricted statistical power likely contributed to not finding significant differences between the intervention and control groups. However, it is still important to provide selective interventions in early childhood to reduce symptomatology and help children develop protective skills that will prevent future development and an anxiety disorder. A meta-analytic review on anxiety prevention programs for children and adolescents reported that program type (universal or selected) did not moderate program

effectiveness (Fisak, Richards, & Mann, 2011). However, this review included very few early intervention programs highlighting the need for more research in this area to best determine the most effective and cost-efficient means of preventing anxiety in youth. Prevention is an important area of study because research suggests that children receiving treatment for anxiety may drop out or fail to respond to the treatment provided; hence, a more powerful effect may be for programs to decrease the overall incidence of anxiety disorders using wide-scale prevention programs. Clinical and community university programs should make an effort to partner with schools to help disseminate the intervention programs that have been developed over recent years and have been shown to be efficacious. As noted by Domitrovich et al. (2008) there are several identified factors that can affect the quality of implementing prevention and intervention programs. It is imperative that researchers are well aware of these challenges and ensure that they are addressed prior to trialing these prevention and intervention programs in schools.

Despite the stated limitations of this study, this was the first study evaluating the Fun FRIENDS program, a school-based prevention program, in the United States. Results of this study suggest more research is needed to ensure that this program benefits those children most in need. Furthermore, given the few programs targeting anxiety symptoms in preschool children, it is important that research identify effective programs to provide schools and communities with evidence-based prevention programs. Moreover, this research was conducted with a rural population of children who often are not part of research trials for school-based programs. Little is known about prevention effectiveness in rural communities; therefore, our demonstration of moderate effects is encouraging. Future research will explore longitudinal effects of the program. Ultimately, this research strongly supported the notion of prevention and sought to provide children with long lasting skills that will influence their resiliency to life stressors. As noted by

Ryan (Fun Friends, 2008), “Prevention is much better than a cure. When children are encouraged to develop their self-worth and resilience, they are more likely to become happy and successful people in their later years.” (p.v).

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## Tables

**Table 1:**

Means, Standard Deviations, and Reliabilities

*Whole Sample (n=110)*

<b>Construct</b>	<b>Mean</b>	<b>SD</b>
Age	5.1	.34
Anxiety	6.5	8.4
SDQ_Total	8.7	6.1
SDQ_emotional	1.7	2.2
SDQ_peers	1.5	1.7
SDQ_prosocial	8.1	2.3

*Intervention School (n=57)*

<b>Construct</b>	<b>Mean</b>	<b>SD</b>	<b><math>\alpha</math></b>
Age	5.1	.34	n/a
Anxiety	7.1	9.4	.90
SDQ_Total	8.1	6.1	.64
SDQ_emotional	1.8	2.4	.82
SDQ_peers	1.6	1.9	.58
SDQ_prosocial	7.9	2.4	.83

*Control School (n=53)*

<b>Construct</b>	<b>Mean</b>	<b>SD</b>	<b><math>\alpha</math></b>
Age	5.1	.35	n/a
Anxiety	5.9	7.1	.87
SDQ Total	9.3	6.1	.68
SDQ_emotional	1.6	2.0	.73
SDQ_peers	1.5	1.6	.52
SDQ_prosocial	8.3	2.1	.80

**Table 2:**

Means and Standard Deviations for the PAS, SDQ

*Intervention School*

<b>Measure</b>	<b>Pre n</b>	<b>Pre x</b>	<b>Pre SD</b>	<b>Post n</b>	<b>Post x</b>	<b>Post SD</b>	<b>F/U n</b>	<b>F/U x</b>	<b>F/U SD</b>
<b>PAS-T</b>	58	7.07	9.44	58	9.26	10.61	57	5.56	7.51
<b>SDQ-T</b>	58	8.17	6.06	58	6.69	5.65	58	5.62	5.56

PAS-T= Preschool Anxiety Scale, Teacher; SDQ-T= Strengths and Difficulties Questionnaire, Teacher;

*Control School*

<b>Measure</b>	<b>Pre n</b>	<b>Pre x</b>	<b>Pre SD</b>	<b>Post n</b>	<b>Post x</b>	<b>Post SD</b>	<b>F/U n</b>	<b>F/U x</b>	<b>F/U SD</b>
<b>PAS-T</b>	52	6.0	7.19	50	2.79	4.59	50	1.66	2.95
<b>SDQ-T</b>	52	9.42	6.05	50	7	6.15	50	5.54	5.34

PAS-T= Preschool Anxiety Scale, Teacher; SDQ-T= Strengths and Difficulties Questionnaire, Teacher

**Table 3:***Correlations Between Variables*

<b>Construct</b>	1	2	3	4	5	6	7
1. Age	-						
2. Gender	.08	-					
3. Anxiety	.05	-.12	-				
4. Emotional	.00	-.16	.67***	-			
5. Peer Diffs	.03	-.08	-.21*	.05	-		
6. Prosocial	.13	-.06	-.03	-.12	-.36**	-	
7. SDQ_Total	.01	-.00	.29**	.49***	.61***	-.62***	-

\*=.05 \*\*=.01 \*\*\*=.001

**Table 4:***High/Low-Risk Changes in Pre/Post/Follow-Up Anxiety (ANOVA)*

	<b>df</b>	<b>F</b>	<b><math>\eta^2</math></b>	<b><i>p</i></b>
<b>Time</b>	1	16.38	.14	.00*
<b>Anx_Risk</b>	1	34.89	.25	.00*
<b>Time*Risk</b>	1	35.90	.26	.00*

\* $p < .01$  is significant

**Table 5:***Decreases in SDQ\_Total Symptoms ANOVA*

<b>SDQ_Total</b>	<b>df</b>	<b>F</b>	<b><math>\eta^2</math></b>	<b><i>p</i></b>
<b>Time</b>	2	10.77	.09	.00*
<b>School</b>	1	.36	.003	.58
<b>School x Time</b>	2	.54	.005	.58

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$

**Table 6:***Intervention Group decreases in Socio-emotional scores from pre to post*

Subscale	<i>t</i> (57)	<i>p</i>
<b>Emotional Sx</b>	.05	.96
<b>Peer Problems</b>	4.45	<b>.00***</b>
<b>Prosocial Behaviors</b>	-1.59	.056
<b>SDQ_Total Difficulties</b>	2.23	<b>.03*</b>

\**p*<.05 \*\**p*<.01 \*\*\**p*<.001**Table 7:***Paired Samples t-test of for High/Low Risk Anxiety Intervention Group*

Anxiety Symptoms				Emotional Symptoms			Peer Difficulties		
Low Risk	Pre	Post	<i>p</i>	-	-	-	Pre	Post	<i>p</i>
(n=35)	M=1.39 (1.99)	M=6.75 (5.38)	.000***				M=1.5 (1.89)	M=.33 (.68)	.000***
High Risk	Post	F/Up		Pre	Post	<i>p</i>	Pre	Post	<i>p</i>
(n=21)	M=13.5 7 (15.29)	M=3.43 (4.58)	.002**	M=2.64 (3.01)	M=.64 (1.72)	.006**	M=1.68 (1.94)	M=.73 (.88)	.033*

\**p*<.05 \*\**p*<.01 \*\*\**p*<.001

Control Group

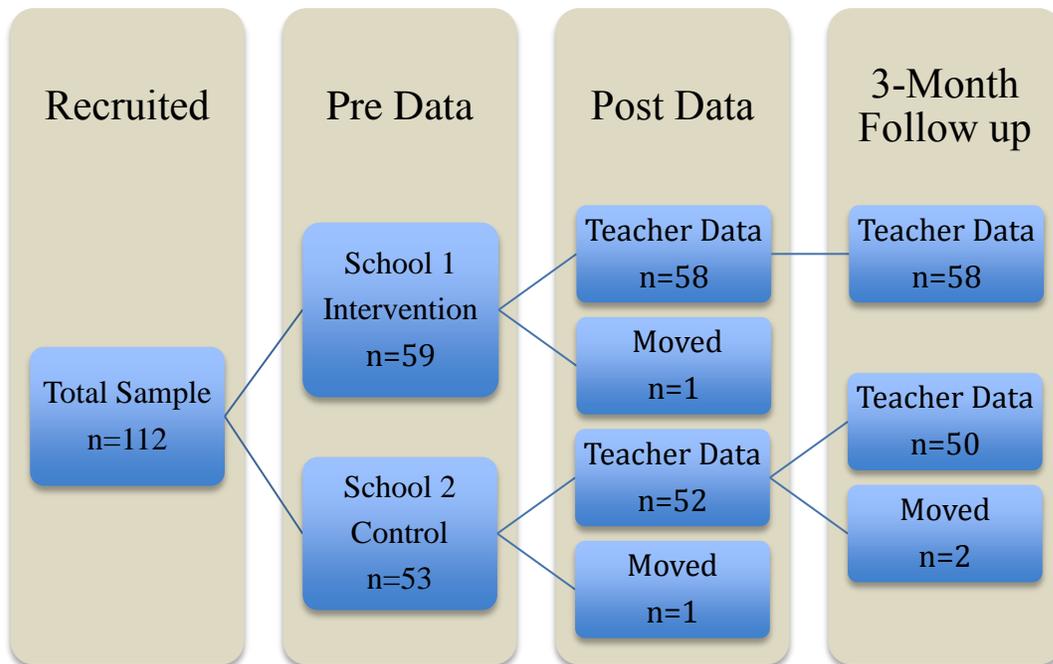
Anxiety Symptoms				Emotional Symptoms			Peer Difficulties		
	Pre	Post	<i>p</i>	Pre	Post	<i>p</i>	Pre	Post	<i>p</i>
<b>High Risk</b>	M=13.71 (7.94)	M=3.81 (4.83)	.000***	M=3.85 (2.12)	M=.88 (1.73)	.002**	M=1.58 (1.55)	M=.82 (1.34)	.015*
(n=17)									

\**p*<.05 \*\**p*<.01 \*\*\**p*<.001

## Figures

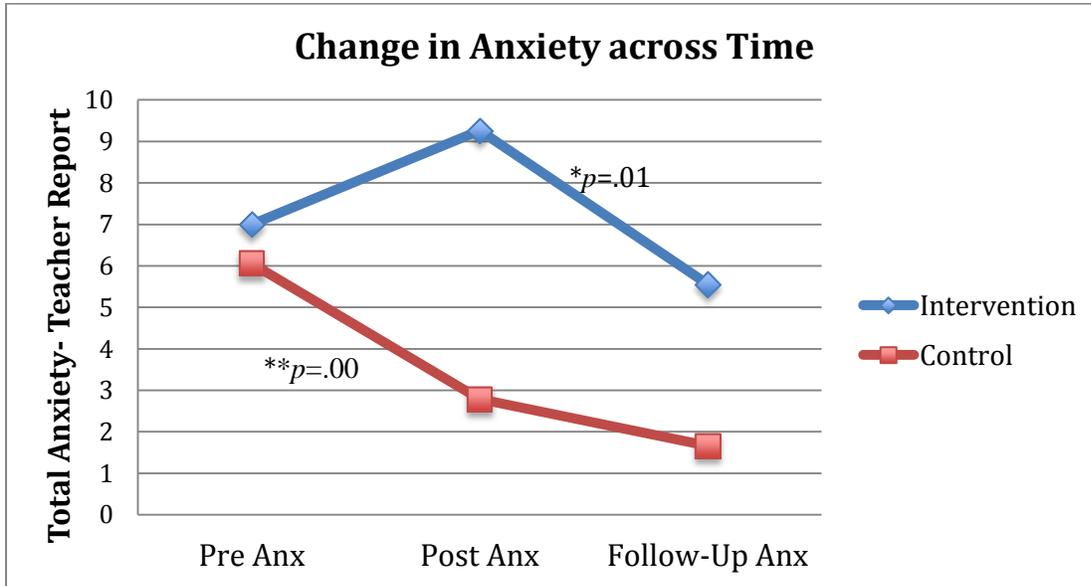
**Figure 1:**

*Flow of participants at each assessment point*



**Figure 2:**

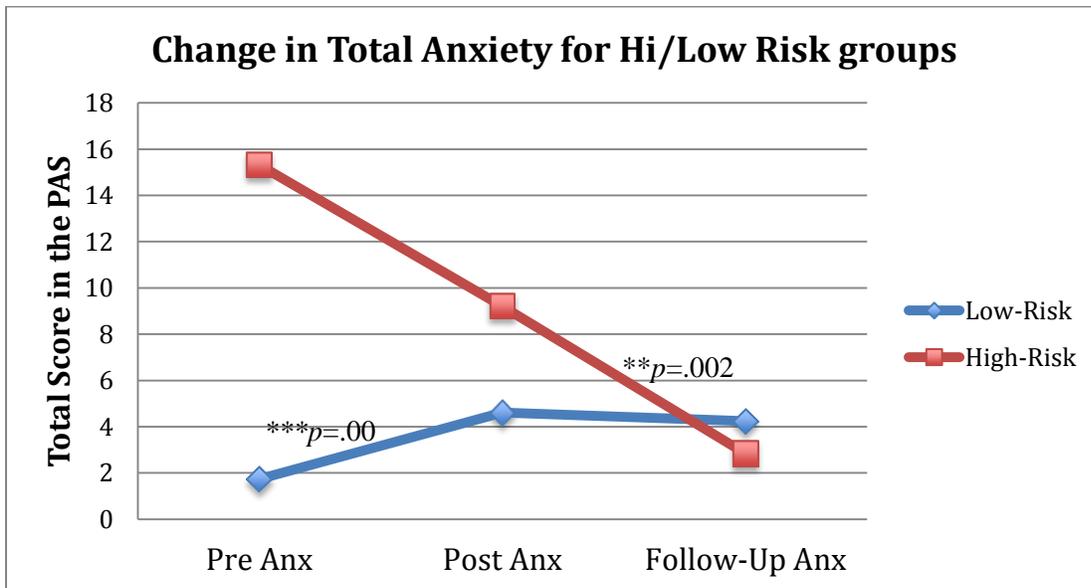
*Between group change in pre-post intervention anxiety symptoms*



\*\*There was a significant decrease in anxiety symptoms from pre to post for children in the control group and a significant decrease in anxiety symptoms from post to follow-up for children in the intervention group

**Figure 3:**

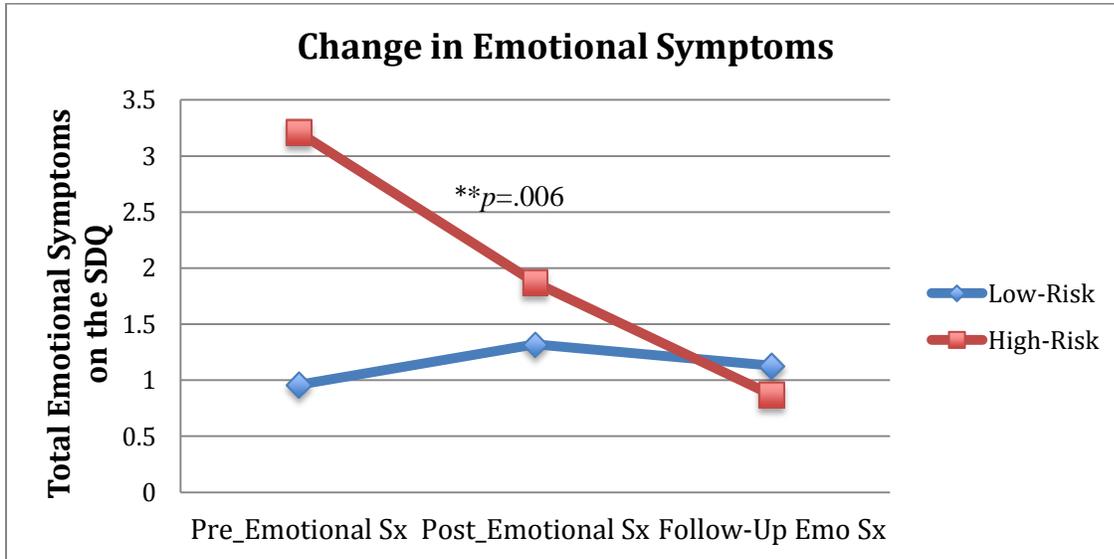
*Change in Total Anxiety for the Hi/Low risk anxiety intervention groups*



\*\*There was a significant decrease in anxiety symptoms for children in the high-risk group. There was a significant increase in anxiety symptoms from pre to post for children in the low-risk group.

**Figure 4:**

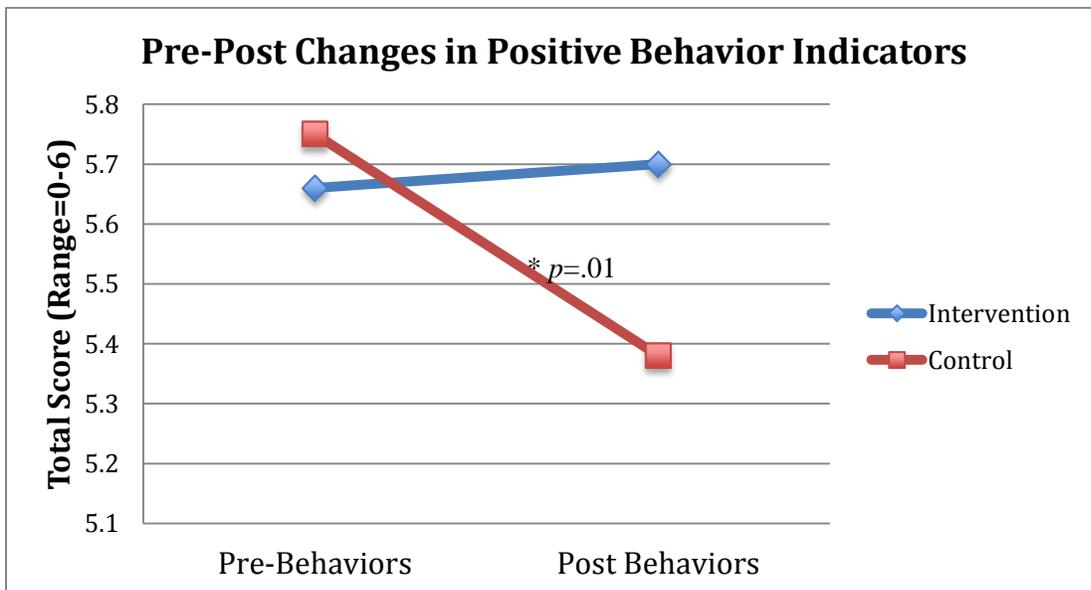
*Changes in Emotional Symptoms over time for Hi/Low anxiety Risk Groups*



\*\*There was a significant decrease in emotional symptoms for the high-risk group from pre to post intervention.

**Figure 5:**

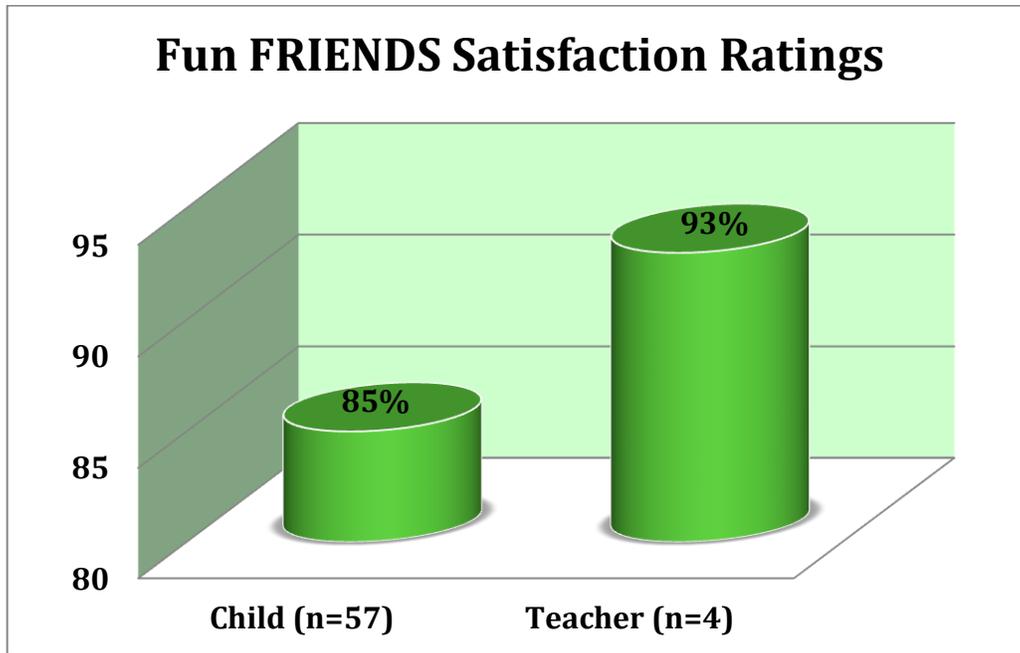
*Pre-post Changes in Teacher Reported Positive Behaviors on Report Cards*



\*\*There was a significant decrease in positive behaviors in the control group from pre to post.

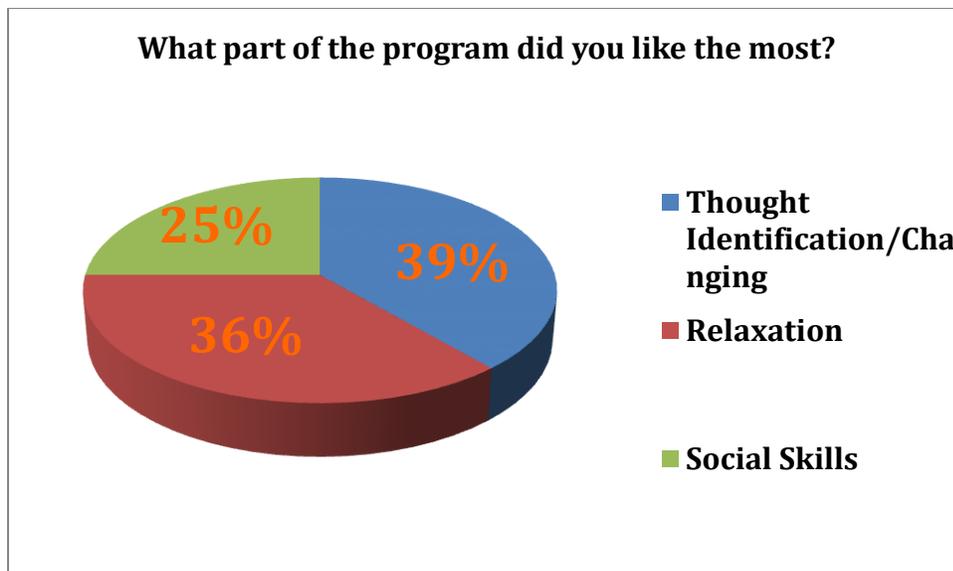
**Figure 6:**

*Child and Teacher Satisfaction*



**Figure 7:**

*Percentage of children ranking favorite part of program*



## Appendix

## Appendix A. Outline of Fun FRIENDS Sessions

Lesson Number	Acronym	Content
1: Getting Started		~Rapport building and introduction of group participants ~Establishing group guidelines ~Normalizing anxiety and individual differences
2: My Feelings	F(Friends)	~Learning about feelings ~Enhancing self-esteem in self ~Recognition of individual strengths
3: Your Feelings	F (Friends)	~Affective education, friendship skills ~Introduction to relationship between thoughts and feelings
*4: Our Bodies and Relaxation Games	R (Relax)	~ <b>F:</b> Feelings. Identifying physiological symptoms of worry. ~ <b>R:</b> Remember to relax. Have quiet time. Relaxation activities
*5: “Red” and “Green” Thinking Bubbles	I (I Can Try)	~ <b>I:</b> I can do it! I can try my best! ~Identifying self-talk and (un) helpful thoughts
*6: Challenging “Red” Thoughts and changing into “Green” thoughts	I (I Can Try)	~ <b>I:</b> Challenging unhelpful thoughts
7: Doing things one step at a time	E (Encourage)	~ <b>E:</b> Explore solutions and coping step plans ~ Introducing coping step plans and setting goals
8: Steps to Being a Good Friends	E (Encourage)	~ <b>E:</b> Encourage- how to be a good friend ~Learning to help others feel better
9: Giving Ourselves a Pat on the Back	N (Nurture)	~ <b>N:</b> Nurture- rewarding yourself ~How to plan a party
10: Family, Schools, Neighborhoods	N (Nurture)	~ <b>N:</b> Nurture ~Identifying role models and positive influences
11: Our Circle of Love and Friends	D (Don’t forget to practice)	~ <b>D:</b> Don’t forget to be brave ~Identifying our support systems
12: Party	S(Stay ☺)	~ <b>S:</b> Stay happy ~Learning to be happy with our efforts and celebrate success

**Appendix B. Measures**

**PRESCHOOL ANXIETY SCALE  
(Parent Report)**

Your Name:  Date: \_\_\_\_\_

Your Child's Name:

Below is a list of items that describe children. For each item please circle the response that best describes your child. Please circle the **4** if the item is **very often true**, **3** if the item is **quite often true**, **2** if the item is **sometimes true**, **1** if the item is **seldom true** or if it is **not true at all** circle the **0**. Please answer all the items as well as you can, even if some do not seem to apply to your child.

	Not True at All	Seldom True	Sometimes True	Quite Often True	Very Often True
1 Has difficulty stopping him/herself from worrying	0	1	2	3	4
2 Worries that he/she will do something to look stupid in front of other people	0	1	2	3	4
3 Keeps checking that he/she has done things right (e.g., that he/she closed a door, turned off a tap)	0	1	2	3	4
4 Is tense, restless or irritable due to worrying	0	1	2	3	4
5 Is scared to ask an adult for help (e.g., a preschool or school teacher)	0	1	2	3	4
6 Is reluctant to go to sleep without you or to sleep away from home	0	1	2	3	4
7 Is scared of heights (high places)	0	1	2	3	4
8 Has trouble sleeping due to worrying	0	1	2	3	4
9 Washes his/her hands over and over many times each day	0	1	2	3	4
10 Is afraid of crowded or closed-in places	0	1	2	3	4
11 Is afraid of meeting or talking to unfamiliar people	0	1	2	3	4
12 Worries that something bad will happen to his/her parents	0	1	2	3	4
13 Is scared of thunder storms	0	1	2	3	4
14 Spends a large part of each day worrying about various things	0	1	2	3	4
15 Is afraid of talking in front of the class (preschool group) e.g., show and tell	0	1	2	3	4
16 Worries that something bad might happen to him/her (e.g., getting lost or kidnapped), so he/she won't be able to see you again	0	1	2	3	4
17 Is nervous of going swimming	0	1	2	3	4

	Not True at All	Seldom True	Sometimes True	Quite Often True	Very Often True
18 Has to have things in exactly the right order or position to stop bad things from happening.....	0	1	2	3	4
19 Worries that he/she will do something embarrassing in front of other people.....	0	1	2	3	4
20 Is afraid of insects and/or spiders.....	0	1	2	3	4
21 Has bad or silly thoughts or images that keep coming back over and over.....	0	1	2	3	4
22 Becomes distressed about your leaving him/her at preschool/school or with a babysitter.....	0	1	2	3	4
23 Is afraid to go up to group of children and join their activities.....	0	1	2	3	4
24 Is frightened of dogs.....	0	1	2	3	4
25 Has nightmares about being apart from you.....	0	1	2	3	4
26 Is afraid of the dark.....	0	1	2	3	4
27 Has to keep thinking special thoughts (e.g., numbers or words) to stop bad things from happening.....	0	1	2	3	4
28 Asks for reassurance when it doesn't seem necessary.....	0	1	2	3	4
29 Has <b>your child ever experienced anything really bad or traumatic</b> (e.g., severe accident, death of a family member/friend, assault, robbery, disaster) .....	<b>YES</b>	<b>NO</b>			

Please briefly describe the event that your child experienced.....

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If you answered **NO** to **question 29**, please **do not** answer questions 30-34. **If you answered YES, please DO** answer the following questions.

**Do the following statements describe your child's behaviour since the event?**

30 Has bad dreams or nightmares about the event.....	0	1	2	3	4
31 Remembers the event and becomes distressed.....	0	1	2	3	4
32 Becomes distressed when reminded of the event.....	0	1	2	3	4
33 Suddenly behaves as if he/she is reliving the bad experience.....	0	1	2	3	4
34 Shows bodily signs of fear (e.g., sweating, shaking or racing heart) when reminded of the event .....	0	1	2	3	4

**PAS- Teacher**

**SPENCE PRESCHOOL ANXIETY SCALE (Teacher Version)**

Below is a list of items that describe children. For each item please circle the response that best describes the child. Please circle the **4** if the item is **very often true**, **3** if the item is **quite often true**, **2** if the item is **sometimes true**, **1** if the item is **seldom true** or if it is **not true at all** circle the **0**. Please answer all the items as well as you can, even if some do not seem to apply to this child.

**0=Not At All True 1=Seldom True 2=Sometimes True 3=Quite Often True 4=Very Often True**

- 1. Repeatedly asks about parent(s) during the day..... 0 1 2 3 4
- 2. Has difficulty stopping him/herself from worrying..... 0 1 2 3 4
- 3. Keeps checking that he/she has done things right (e.g., that he/she closed a door, turned off a tap)..... 0 1 2 3 4
- 4. Complains of headaches or stomachaches when it is time to be dropped off at preschool/school..... 0 1 2 3 4
- 5. Is tense, restless or irritable due to worrying..... 0 1 2 3 4
- 6. Is scared to ask an adult for help (e.g., a preschool or school teacher)..... 0 1 2 3 4
- 7. Is scared of heights (high places)..... 0 1 2 3 4
- 8. Washes his/her hands over and over many times each day..... 0 1 2 3 4
- 9. Is afraid of meeting or talking to unfamiliar people..... 0 1 2 3 4
- 10. Worries that something bad will happen to his/her parents..... 0 1 2 3 4
- 11. Spends a large part of each day worrying about various things..... 0 1 2 3 4
- 12. Is afraid of talking in front of the class (preschool group) e.g., show and tell 0 1 2 3 4
- 13. Worries that something bad might happen to him/her (e.g., getting lost or kidnapped), so he/she won't be able to see his/her parents again..... 0 1 2 3 4
- 14. Has to have things in exactly the right order or position to stop bad things from happening..... 0 1 2 3 4
- 15. Worries that he/she will do something embarrassing in front of other people 0 1 2 3 4
- 16. Is afraid of insects and/or spiders..... 0 1 2 3 4
- 17. Has bad or silly thoughts or images that keep coming back over and over.... 0 1 2 3 4
- 18. Becomes distressed when he/she is dropped off at preschool/school..... 0 1 2 3 4

<b>19.</b> Is afraid to go up to a group of children and join their activities.....	0	1	2	3	4
<b>20.</b> Has to keep thinking special thoughts (e.g., numbers or words) to stop bad things from happening.....	0	1	2	3	4
<b>21.</b> Asks for reassurance when it doesn't seem necessary.....	0	1	2	3	4
<b>22.</b> Cries for parent whilst at preschool/school.....	0	1	2	3	4

***Thank you for completing this questionnaire!***

# Strengths and Difficulties Questionnaire (SDQ)

## Strengths and Difficulties Questionnaire

**P or T 4-10**

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain. Please give your answers on the basis of the child's behavior over the last six months or this school year.

Child's name .....

Male/Female

Date of birth.....

	Not True	Somewhat True	Certainly True
Considerate of other people's feelings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restless, overactive, cannot stay still for long	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often complains of headaches, stomach-aches or sickness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shares readily with other children, for example toys, treats, pencils	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often loses temper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rather solitary, prefers to play alone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generally well behaved, usually does what adults request	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Many worries or often seems worried	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Helpful if someone is hurt, upset or feeling ill	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Constantly fidgeting or squirming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has at least one good friend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often fights with other children or bullies them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often unhappy, depressed or tearful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generally liked by other children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Easily distracted, concentration wanders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nervous or clingy in new situations, easily loses confidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kind to younger children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often lies or cheats	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Picked on or bullied by other children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often offers to help others (parents, teachers, other children)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thinks things out before acting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Steals from home, school or elsewhere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gets along better with adults than with other children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Many fears, easily scared	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Good attention span, sees work through to the end	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Signature .....

Date .....

Parent / Teacher / Other (Please specify):

**Thank you very much for your help**

© Robert Goodman, 2005

## Appendix C. Parent Recruitment Letter



Dear Parents,

We would like to inform you of a program that will begin at Eastern Elementary/Middle School this year in your child's Kindergarten class. In collaboration with the Child Study Center at Virginia Tech, we will be implementing the Fun FRIENDS program in each of the Kindergarten classes. These lessons will take place during the regularly scheduled weekly Guidance time with Ms. Ricketts, with the support of Mr. Canaday and the classroom teachers. The Fun FRIENDS program will be implemented in each Kindergarten class during the 30 minute Guidance period for 12 weeks beginning on [ insert date]. The counselor will use small group activities to help children learn the necessary social and emotion skills to become productive and engaged students.

Throughout the 12 weeks you will be given some extra information regarding this program and how you can help your child and other family members practice the positive coping skills at home. There will be two parent groups during the 12 week program. Parents will be asked to complete two questionnaires prior to the beginning of the program and following completion of the program. Additionally, to assess the long term impact of the program, parents and teachers will complete the same two questionnaires for the children at two follow-up time points. Since the evaluation of this program requires extra work on the part of everyone, teachers will receive gift cards for their participation and all parents will be entered into raffle drawings for visa gift cards.

We kindly thank you for your interest and support with the Fun FRIENDS program. We are sure it will be a valuable experience for you as well as the children, teachers and our school.

Nationwide, teachers report that at least one out of every five children in their classrooms lack appropriate social skills which interfere with their academic achievement. For this reason, it would be beneficial for classrooms to implement programs such as Fun Friends which promotes resilience, self-esteem and confidence while teaching important skills and techniques to cope with challenging situations. The symbolism drawn from the word FRIENDS is based on the following ideas:

- The word FRIENDS helps children to remember each of the skills taught throughout the program (i.e. each letter stands for a new skill learned).
- Our body is our FRIEND and tells us when we are feeling worried or nervous or upset by giving us clues.
- It is important to learn to be our own FRIEND and reward ourselves when we try hard.
- It is important to make FRIENDS, so that we can build our social support network and feel happier.

- FRIENDS can help us to cope with difficult situations more effectively.

We thank you kindly for your interest and support with the Fun Friends program. We are sure it will be a valuable experience for the children, teachers, and schools involved. Enclosed you will find the following items: instruction letter, permission form, and the questionnaires. **Please return the permission form and questionnaires to the school in the envelope provided.**

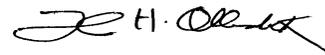
Kind Regards,

Emily Ricketts, M.A.  
Guidance Counselor

*Krystal M. Lewis*

Krystal M. Lewis, M.S.  
Doctoral Student  
Virginia Tech

Greg Canaday  
School Principal



Thomas H. Ollendick, Ph.D  
Distinguished Professor  
Principal Investigator

Please feel free to contact us with questions or if interested in obtaining more information. Ms. Emily Ricketts, your school guidance counselor will be able to address any questions you may have about the program. Additionally, you can contact the Virginia Tech collaborators at [klewis07@vt.edu](mailto:kewis07@vt.edu) or 540-231-3514.

## Appendix D. Parent Instruction Letter

Dear Parents,

We are excited to have this opportunity to work with Ms. Krystal Lewis from the Department of Psychology at Virginia Tech to implement the Fun FRIENDS program in our school. ***As part of the program we would like for you to take some time to complete the two attached questionnaires, which ask some general information about your child and his or her emotional development.*** Your answers to these questions will be confidential and will only be seen by Ms. Lewis, Dr. Ollendick, and their staff at Virginia Tech. Your information will be numbered and therefore no identifying information will be present on the forms. We ask that you answer each question completely and to the best of your ability. It is also important to understand that there are no right or wrong answers so we ask that you answer each question as honestly as possible. These questionnaires are optional and you do not need to complete them if you so choose.

It would be much appreciated if you would return the questionnaires in the attached envelope by [insert date](whether you choose to complete them or not). It is important that you return the questionnaires prior to the start of the Fun FRIENDS program in your child's classroom which will begin on [insert date].

The first parent informational meeting will be held on [insert date] at Eastern Elementary School. As a token of our appreciation, you will be entered into a raffle for a visa gift card valued at \$50. Additionally, we will ask that you complete questionnaires at the end of the 12 weeks of the program, during April of 2012, and the beginning of the next school year. ***You can send the questionnaires back to school by placing them in your child's folder or you can mail the forms to the researcher by [insert date] at:***

*Krystal M. Lewis  
Child Study Center  
460 Turner St., Collegiate Square  
Blacksburg, VA 24060*

If you choose not to complete the questionnaires, your child will still be involved in the program during guidance time. Thank you for helping evaluate this program. Your involvement will help us improve our program to help your child become socially and emotionally well adjusted as they progress through elementary school years.

If you have any questions or concerns while completing the questionnaires or are having trouble understanding the meaning of a particular question, Ms. Krystal M. Lewis, project director, will be available to answer any questions or address any concerns you may have at 540-231-3514. Additionally, you can contact school personnel.

Thank you once again for your involvement!!

## **Appendix E. Parent Consent /Permission Forms**

### **Virginia Polytechnic Institute and State University Parent Permission Form**

#### **Evaluation of the Fun Friends Program in Kindergarten Classrooms**

Krystal M. Lewis, M.S.

#### **I. Purpose of this Project**

You are invited to participate in this study evaluating the effectiveness of a social-emotional development program for children in kindergarten. Specifically, we are examining whether the 12-week Fun FRIENDS program leads to improved social and emotion skills in these young children.

What we learn from this study will help us to understand how to best prepare young children for dealing with their emotions and different types of stressors they might experience. The goals of this program include preventing later emotional problems in children. Therefore, we will include 60 children in 3 different classrooms at Eastern Elementary School in Giles County.

#### **II. Procedures**

Prior to the start of the program, we ask that you complete two questionnaires pertaining to your child. The two questionnaires regarding your child are the Strengths and Difficulties Questionnaire (SDQ) and the Emotion Regulation Checklist (ERC). We would also like to collect data from your child's teacher on your child's social behavior before and after the program. They will complete the same SDQ questionnaire that you are being asked to complete and one additional questionnaire on emotional symptoms in young children. Following completion of the questionnaires by the parents and teachers, Ms. Emily Ricketts will begin implementing the program once a week in each classroom for 12 weeks. A description of the program will be provided to the children in terms they understand and it will be explained that there will be no consequence if they decide they do not want to participate. These sessions will last for about 30 minutes each week. Following the end of the program, you will be asked to fill out the same two questionnaires on your child along with a satisfaction questionnaire, intended to obtain your impressions regarding the Fun FRIENDS program. The researcher from Virginia Tech, Ms. Krystal Lewis, will administer a satisfaction questionnaire to your child at the end of the 12-week intervention to determine how well they liked the program also. Finally, you will be asked to fill out these same two questionnaires during April of 2012, and at the beginning of the first grade. The purpose here is to see if the program continues to have good effects one year after it is provided.

During the weekly program, you will have the opportunity to participate in activities with your child at home as well as attend parent sessions to obtain information on the program and how to help develop social skills and positive coping skills to prevent the later development of emotional problems. In these weekly sessions, the guidance counselor will read books, play games, and discuss other relevant parts of the program with the children.

#### **III. Risks**

There are minimal risks associated with this research evaluation project. The guidance counselor implementing this program will be teaching children relaxation and emotion regulation skills. She will teach them how to be brave and how to be a good friend. There are not any risks for you, directly. Your child may be discussing situations that make them upset or fearful and will be taught how to use appropriate relaxation and positive coping skills.

#### **IV. Benefits**

There may be direct benefits to you and your child. You will be given the opportunity to attend the two parent groups and learn techniques to deal with issues relating to developing appropriate social skills and emotion regulation. This information can be used as your child develops over the years and you will be able to

continue to use the skills with your child. For children, they will learn skills that will help them cope with life's stressors and challenging situations. Lastly, your participation in this project will potentially benefit the larger society by demonstrating the effectiveness of this program with young children.

**V. Extent of Anonymity and Confidentiality**

Any demographic information that is collected from you will be kept confidential. Every child participating in the study will be assigned a non-identifying number and data will be stored utilizing this number. The researchers involved in this study will have access to the data collected however the information will not be shared with any other individuals. The data (questionnaires) will be stored at the Virginia Tech Child Study Center on password protected computers and locked filing cabinets. At no time will the researchers release the results of the study to anyone other than individuals working on the project without your written consent. It is possible that the Institutional Review Board (IRB) of Virginia Tech may view this study's collected data for auditing purposes. The IRB is responsible for the oversight of the protection of human subjects involved in research.

**VI. Compensation**

In completing and returning questionnaires, you will be entered into a drawing to win a raffle for a gift card (valued at \$50.00). Additionally, parents will have the opportunity to win gift cards at each of the parent group meetings.

**VII. Freedom to Withdraw**

As a participant in this study, you *do* have the freedom to withdraw your consent at any point in time over the course of this project. If you choose to stop participating, your decision will not affect your relationship with your child's teacher, Eastern Elementary School, Giles County Schools, or Virginia Tech.

**VIII. Approval of Research**

This research project has been approved, as required, by the Institutional Review Board for Research Involving Human Subjects at VPI&SU and by the Department of Psychology at Virginia Tech.

**IX. Subjects Responsibility**

I voluntarily agree to participate in this study. I have the following responsibilities:

- Complete two questionnaires at four time points for my child
- Complete one questionnaires pertaining to my satisfaction regarding the program
- Reinforce the techniques children learn during the 12-week Fun FRIENDS intervention

**X. Subject's Permission**

I have read the Consent Form and conditions of this project. I have had all of my questions answered. I hereby acknowledge the above and give my signed consent for my child to participate in this study:

\_\_\_\_\_ Date \_\_\_\_\_  
Parent signature

\_\_\_\_\_ Date \_\_\_\_\_  
Witness

I have read the above information and *agree* to complete the questionnaires at the abovementioned assessment periods

I have read the above information and *do not* wish to complete the questionnaires

Should I have any questions about this research or its conduct, and research subjects' rights, and whom to contact in the event of a research-related injury to the subject, I may contact:

Krystal M. Lewis

Investigator

(540) 231-3514/ [klewis07@vt.edu](mailto:klewis07@vt.edu)

Telephone/e-mail

Thomas H. Ollendick, Ph.D

Faculty Advisor

(540) 231-6451/ [tho@vt.edu](mailto:tho@vt.edu)

Telephone/e-mail

David Harrison, Ph.D

Departmental Reviewer/Department Head

(540) 231- 6581/ [dwh@vt.edu](mailto:dwh@vt.edu)

Telephone/e-mail

David M. Moore

Chair, Virginia Tech Institutional Review  
Board for the Protection of Human Subjects  
Office of Research Compliance  
200 Kraft Drive, Suite 2000 (0497)  
Blacksburg, VA 24060

(540) 231-4991/ [moored@vt.edu](mailto:moored@vt.edu)

Telephone/e-mail

**Appendix F. Child Assent Form**

**Virginia Polytechnic Institute and State University  
Child Assent Form**

**Title: Evaluation of the Fun Friends Program in Kindergarten Classrooms**

This following script will be read to the children at the start of the intervention:

*Over the next 3 months, we will be starting a new program that will help you learn many different new skills. Each week you will learn skills that will help you identify when you feel happy, sad, angry or scared. We will all be learning how to be brave when things make us scared by learning how to relax. We will also talk about being a good friend and helping others. We will have lots of fun doing these activities, but if you don't want to participate that is okay. You will not get in trouble with your teacher or your school.*

**By marking below, I agree that I would like to be in the program:**

Child's Name: \_\_\_\_\_

Witness: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix G. Parent Follow up Letter

Dear Parents,

We have now completed the weekly Fun FRIENDS program in your child's classroom. We do thank you for allowing your child to participate and agreeing to complete follow-up questions. As mentioned at the start of the program, we would like to evaluate how effective this program was in providing your child with social and emotional skills linked to positive development.

*As part of the program, once again we would like you to take time to complete the two attached questionnaires, which ask some general information about your child and his or her social-emotional development. These are the same questionnaires you completed prior to the program.* Your answers to these questions will be confidential and will only be seen by Ms. Lewis, Dr. Ollendick, and their staff at Virginia Tech. Again, remember that your information is numbered and therefore does not consist of any identifying information. We ask that you answer each question completely and to the best of your ability. It is also important to understand that there are no right or wrong answers so we ask that you answer each question as honestly as possible.

It would be much appreciated if you would return the questionnaires in the attached envelope within the next week (whether you choose to complete them or not). As a token of our appreciation, you will be entered into a raffle for a visa gift card valued at \$50. Additionally, as a reminder, we will ask that you complete questionnaires during April of 2012 and at the beginning of next school year. *You can send the questionnaires back to school by placing them in your child's folder and the researcher will collect them from the classroom teachers.*

*Alternatively, you can mail the forms to the researcher by [insert date] at:*

*Krystal M. Lewis  
Child Study Center  
460 Turner St., Collegiate Square  
Blacksburg, VA 24060*

Thank you for helping in this research evaluation project. Hopefully, your involvement will help us improve our intervention program to help your child become socially and emotionally well adjusted as they progress through elementary school years.

If you have any questions while completing the questionnaires or are having trouble understanding the meaning of a particular question, please do not hesitate to call us at (540) 231-3514.

Thank you once again for your involvement!!

## Appendix H. Sample Handouts to Parents



Hello Parents!! We are several sessions into our Fun FRIENDS program with the kindergarten students and things are going quite well. We wanted to provide you with an update regarding the topics and sessions that were covered. Below are some tips for you to follow that would help your child learn the social and emotional skills being taught during guidance. Additionally, the page numbers are listed for you to follow along in your child's book.

### **Session 1 (Week of October 3<sup>rd</sup>)**

*(Introduction to being brave; pg 2-10):*

- What it means to be brave: smile, eye contact, stand up tall, use a brave voice, try your best, being kind to others, trying something new, facing our fears
- Encourage your child to look people in the eye when talking, smile, stand up tall, and speak in a brave voice
- Catch your child being brave. Give descriptive praise and reward them using their brave chart (you might like to negotiate rewards for when they have a certain number of stickers).
- At the dinner table each night, have each family member share their “happy thing”
- Encourage your child to talk about the things that upset them including any fear and worries. Share some of your own childhood or current fears and worries. This will help your child understand that everybody feels scared and worried sometimes! Fun Friends is about learning ways to cope with these feelings and situations.

### **Session 2 (Week of October 10<sup>th</sup>)**

*(Feelings; pg 11-17):*

- Encourage your child to identify and talk about their feelings, and talk about your own.
- Give your child ideas of new words to describe how they feel
- Recognize and label feelings in your child and in other people by identifying facial expressions and body language, and encourage your child to recognize moments when they can support or assist others. Point out that there are lots of things they can do to help somebody feel better.

When your child experiences unpleasant feelings, talk about constructive things they can do with those feelings. You can use “thumbs up” and “thumbs down” ideas to help them make helpful choices. Praise and reward your child when they take control of their feelings and make “thumbs up” choices