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UTILIZING A SCHOOL-BASED TREATMENT TO ADDRESS SOCIALLY
ANXIOUS ELEMENTARY SCHOOL STUDENTS

by

McKell Nelson

A thesis submitted in partial fulfillment of
the requirements for the degree

of

EDUCATION SPECIALIST

in

Psychology

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2018

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ABSTRACT

Utilizing a School-Based Treatment to Address Socially Anxious
Elementary School Students

by

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Utah State University, 2018

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Department: Psychology

The demand for effective interventions to address socially anxious behaviors is an important issue for school-based professionals. Several cognitive behavioral therapy (CBT) programs have been developed to address these problems specifically in children and adolescents and have been found to be effective in treating youth exhibiting socially anxious behaviors in the clinical setting. Despite the availability of promising clinic-based programs, youth exhibiting socially anxious behaviors rarely receive the attention or treatment that they may need. Moreover, the majority of youth who receive services do so in the school setting where little research has been done in regards to the utility of using these clinic-based programs. Thus, the present study investigated the effect of a brief CBT intervention given in a school-based delivery format on positive peer interactions and self-rating anxiety for four third-grade students with low peer interactions and who are exhibiting socially anxious behaviors. All participants were

given four group psycho-educational lessons on how anxiety works, as well as four brief individual exposure sessions. This training specifically targeted social skills at recess. A multiple baseline across the four students showed replicated positive effects of the intervention relative to a prior baseline condition. Results showed that the treatment package provided an increase in positive peer interactions across all four participants.

(95 pages)

PUBLIC ABSTRACT

Utilizing a School-Based Treatment to Address Socially Anxious
Elementary School Students

McKell Nelson

Despite the availability of promising clinic-based programs, youth exhibiting socially anxious behaviors rarely receive the treatment they may need. Those that do get treatment, often do so in the school setting. Thus, the demand for effective interventions to address these needs in the school-setting is growing. The present study investigated the effects of a modified CBT intervention, delivered in the school setting, on positive peer interactions and self-rating social anxiety. Results showed that the treatment package provided an increase in positive peer interactions across all four participants, as well as a decrease in self-rated anxiety behaviors.

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CHAPTER I

INTRODUCTION

Anxiety disorders in children and youth are one of the most prevalent disorders, ranging from 2-27% (Mychailysyn, Brodman, Read, & Kendall, 2012). Given that many children with anxiety are unidentified and untreated, the actual rate of prevalence could be much higher. Anxiety can interfere with school, social, and familial functioning (Ialongo, Edelsohn, Werthamer-Larsson, Crockett, & Kellam, 1995; Langley, Bergman, McCracken, & Piacentini, 2004; Ryan & Warner, 2012; Woodward & Fergusson, 2001). Of particular interest to this research is the prevalence of anxiety affecting social behaviors which impact 6-21.1% of children and adolescents and can start as early as age 5 (Chavira, Stein, Bailey, & Stein, 2004; Ruscio, 2008). These children are more likely to avoid activities that others would normally engage in, therefore missing out on the opportunity to have positive interactions and gain friendships. Without these opportunities to learn appropriate social skills, these children fail to experience an important aspect of development. Studies have shown that if these impairments progress into adulthood these individuals may be at an increased risk for suicide attempts, alcohol use, inability to work, depression, severe social restrictions, and other negative life outcomes (Angold, Costello, & Erikanli, 1999; Costello, Egger, & Angold, 2005; Donovan & Spence, 2000; Essau, Conradt, & Petermann, 1999; Kessler et al., 2011; Lopez, Turner, & Saavedra, 2005; Rapee, Kennedy, Ingram, Edwards, & Sweeney, 2005; Woodward & Fergusson 2001).

Several cognitive behavioral therapy (CBT) programs have been developed to

address these problems specifically in children and adolescents and have been found to be effective in treating youth exhibiting socially anxious behaviors (Ginsburg & Drake, 2002; Warner et al., 2005). CBT is an approach built on the idea that physiological, behavioral, and cognitive factors all play a role in a child's distress (Kendall & Hedtke, 2006). Therapy is derived from understanding the relationship between cognitions, feelings, and behavior, and the goal is not to "cure" anxiety, but rather to teach adaptive ways to manage or reduce it.

Despite the availability of promising clinic-based programs, youth experiencing social anxiety rarely receive the attention or treatment that they may need (Essau 2005; Warner et al, 2007; Merkanga et al., 2011; Wittchen, Stein, & Kessler, 1999). For example, students who have social anxiety are usually overlooked and under-identified due to the internalizing nature of this disorder, which leads to little or no treatment being provided for these particular children. Moreover, the majority of students who receive services do so in the schools (Burns & Hoagwood, 2002; Merkanga et al., 2011), where limited research has been done in regards to the utility of using these clinic-based programs.

School-based intervention is a proposed solution to this problem to provide easy access to youth (Adelman & Taylorb, 1999; Anglin, 2003; Weist, 1999), reduce barriers such as cost and transportation (Storch & Crisp, 2004), and increase opportunity for prevention, early identification, and intervention (Kendall, Settapani, & Cummings, 2012; Ryan & Warner, 2012). They offer an environment rich in opportunities to engage in communication and social interactions and offer a safe place for both students and

parents against the stigma associated with therapy since many children also receive services there that do not include mental-health concerns (Weist, 1999). Unfortunately, few school-based interventions specifically targeting anxiety affecting social behaviors are supported by scientific evidence (Collins, Westra, Dozois, & Burns, 2004; Evans, Koch, Brady, Meszaros, & Sadler 2012; Kelly et al., 2010; Labellarte, Ginsburg, Walkup, & Riddle, 1999). Therefore, research on effective school-based interventions targeting social anxiety, are pertinent to circumventing this problem.

Thus, the present study sought to integrate evidence-based aspects of previous research in transporting a social anxiety treatment into a school-based delivery. These aspects will include psycho-education, relaxation, positive thinking, coping skills, emotional regulation, and exposure based tasks at recess using new social skills taught throughout sessions. The goal of the study will be to understand the effects of these components on positive peer interactions in a recess setting, as well as on subjective units of distress rated by participants.

CHAPTER II

LITERATURE REVIEW

Despite the high prevalence of anxiety disorders in children and effective treatment outcomes to reduce anxiety symptoms, there is limited research on the relationship between school-based treatments and reduction of social anxiety. The purpose of this literature review is to summarize empirical research on the treatment of anxiety among elementary aged students, particularly the effects on social outcomes. The primary source of literature used in this review was the PsychInfo, EBSCOhost, and the Behavioral Sciences Collection databases. The objectives of the systematic review are as follows.

1. To discuss the characteristics and prevalence of anxiety and the negative outcomes of untreated anxiety.
2. To discuss previous research on treatments in the school setting and changes in social outcomes
3. To discuss the limitations of current research and purpose of the proposed study.

Characteristics and Prevalence of Anxiety

Anxiety disorders in children and adolescents are estimated to range from 2% to 27%, with an average rate of 8%, and are one of the most common disorders among youth with mental disorders (Boyd, Kostanski, Gullone, Ollendick & Shek, 2000; Mychailyszyn et al., 2012). Social anxiety, in particular, is estimated to affect 6% to 21% of children and adolescents and can start as early as 5, peaking around age 12 (Chavira, Stein, Bailey, & Stein, 2004; Ruscio et al., 2008). The actual rate of prevalence, however,

may be even higher, with many children and adolescents remaining unidentified and untreated. Anxiety disorders are characterized by developmentally inappropriate excessive worrying or fears to specific situations or stimuli that are persistent over time and cause considerable distress or impairment in important areas of functioning. Anxiety is commonly accompanied by symptoms of restlessness, fatigue, difficulty concentrating, irritability, muscle tension and sleep disturbances (American Psychiatric Association [APA], 2013). It has been suggested that there are three main types of anxiety in children (Mychailyszyn et al., 2011). First, separation anxiety (SAD) is characterized by excessive fear/worry when children are separated from their caregiver and home. Second, generalized anxiety (GAD) is marked by excessive fear/worry in multiple settings and persists over time. Last, social phobia (SoP) is characterized by an intensive and excessive fear of situations in which social evaluations may take place. There is a high comorbidity rate among these types of anxiety although younger children often report higher levels of separation anxiety while older children report more social and generalized anxiety (Ford, Goodman, & Meltzer, 2003). Various types of anxiety are typically treated similarly and researched collectively in youth (Crawley, Beidas, Benjamin, Martin, & Kendall, 2008; Kendall et al., 2010; Walkup et al., 2008), but any anxiety may have important implications on social outcomes for children and youth.

Negative Outcomes Associated with Anxiety

Children are negatively affected by anxiety in a number of different ways. Children who are anxious are more likely to avoid activities that other children, who are

not experiencing anxiety, normally engage in (e.g., initiating conversation, joining school clubs). Social activities are crucial for children's social development (Beidel, Turner, & Morris, 1999; Connolly & Berstein, 2007; Donovan & Spence, 2000; Mychailyszyn et al., 2011; Verduin & Kendall, 2008). These positive peer interactions and friendships provide opportunities for children to learn appropriate social skills. Thus, not engaging in these activities diminishes their peer support system and opportunities to build friendships, which are vital to the social development and sense of well-being for children who are experiencing anxiety (Hazler & Denham, 2002). Common difficulties among children who are anxious include rejection, victimization, and isolation (Grills & Ollendick, 2002; Rubin, Coplan, & Bowker, 2009). It is also found that these children who are socially isolated tend to report more negative self-perceptions, express greater feelings of social anxiety and loneliness, have higher rates of depression, and have lower self-esteem. Moreover, the children are more likely to be neglected or rejected by their peers (Rubin et al., 2009).

Children experiencing anxiety are also more likely to have difficulties with academic performance than their non-anxious peers (Mcloone, Hudson, & Rapee, 2006; Mychailyszyn, Mendez, & Kendall, 2010; Rapee et al., 2005). Academic difficulties that are associated with poor academic performance include poor teacher-student relationships, difficulties participating in classroom activities (e.g., answering questions, working in groups), and school avoidance (Ialongo et al., 1995; Ryan & Warner, 2012; Woodward & Fergusson, 2001). These social impairments are also associated with long-term functional impairment (Bittner et al., 2007; Costello, Mustillo, Erkanli, Keeler, &

Angold, 2003), such as difficult life stage transitions, underemployment, suicidal ideation (Rudd, Joiner, & Rumzek, 2004), and risk for substance abuse and depression (Angold et al., 1999; Costello et al., 2005; Donovan & Spence, 2000; Essau, Conradt, & Petermann, 1999; Kessler et al., 2011; Lopez et al., 2005; Rapee et al 2005; Woodward & Fergusson 2001).

Despite its negative impact, the majority of children and adolescents with social anxiety are likely to remain untreated (Essau 2005; Warner et al., 2007; Merikanga et al., 2011; Wittchen, Stein, & Kessler, 1999). Less than 20% of youth with these disorders are receiving any treatment (Mychailyszyn et al., 2012), and over 70% of those who do receive services, receive services in the schools (Merikangas et al., 2011; Rones & Hoagwood, 2000). Unfortunately, few school-based interventions are supported by scientific evidence (Collins, Westra, Dozois, & Burns, 2004; Evans et al., 2012; Kelly et al., 2010; Labellarte, Ginsburg, Walkup, & Riddle, 1999). Thus, advantages and disadvantages of a school-based intervention to support anxious students are discussed in the following section.

Transporting Treatments into Schools

Schools can play an integral role in delivering programs to many youth who need mental health services. Based on the large disparity between youth in need of mental health services and those who receive them, and evidence documenting schools as the most common service sector (Famer, Burns, Phillips, Angold, & Costello, 2003), integrating evidence-based interventions into schools is a key strategy for addressing this

public health issue. After reviewing the literature, three types of prevention or early intervention programs tend to be offered in the schools. Universal programs are presented to all students regardless of symptoms and are often designed to enhance general mental health. Selective programs target children and adolescents who are at risk for developing the disorder, while indicated programs are delivered to students who show early or mild symptoms of a disorder. Both indicated and selective programs tend to produce larger effects than universal interventions (Reivich, Gillham, Chaplin, & Seligman, 2005). This could be due to the fact that many students being targeted through a universal program may not be showing any concerns to begin with, so measuring effects may be difficult to accomplish.

There are several main reasons why schools provide an ideal setting for delivering mental health services to youth who are anxious. First, the school provides a single setting where children and adolescents can be accessed for services (Adelman & Taylorb, 1999; Anglin, 2003; Weist, 1999). From an ecological contextual perspective (Bronfenbrenner, 1979), schools constitute an important part of a child's microsystem, serving as one of the most proximal environmental influences in a youth's life. Social anxiety, in particular, is well suited for a school setting because the social nature of the disorder makes group treatment ideal. In schools, time is always limited; therefore, group work provides the most efficient dissemination of treatment to those needing services, with the least amount of tax on school resources. Providing these services in a group, along within the social setting of a school, may help diminish the negative stigma associated with receiving mental health services, and remove common obstacles that can

otherwise prevent youth from receiving care (Storch & Crisp, 2004). Results from 10 trials have showed that cognitive behavioral treatment has similar reductions in anxiety symptoms in children receiving treatment individually or in groups compared to a wait-list control (Barrett, 1998; Barrett, Dadds, & Rapee, 1996; Flannery-Schroder & Kendall, 2000; Kendall, 1994; Kendall et al., 1997; King et al., 1998; Nauta, Scholing, Emmelkamp, & Minderaa, 2003; Shortt, Barrett, & Fox, 2001; Silverman et al., 1999; Spence, Holmes, March, & Lipp, 2006).

Second, in contrast to most behavioral disorders, difficulties associated with anxiety may be less apparent to teachers and parents because these children are often less disruptive. Many parents do not notice the extent of their child's impairment (Kashdan & Herbert, 2001) or think that it is just a phase of their development that they will "grow out" of naturally (Masia, Klein, & Storch, & Corda, 2001). Despite the high prevalence of social anxiety, these issues result in the low identification of those students who are struggling which in turn makes it unlikely for those children to receive services (Essau, Conradt, & Petermann, 1999; Kashdan & Herbert, 2001; Kessler, Berglund, Demler, & Walters, 2005; Wittchen, Stein, & Kessler, 1999). Colognori et al. (2012), however, found that relative to socially anxious students who had told their parents about their distress, the few who had informed school personnel were more likely to access treatment. Thus, involving school personnel in the mental health needs of their students creates opportunities to increase identification and treatment of social anxiety disorders by educating teachers and parents about its symptoms and providing support for making appropriate treatment referrals (Kendall et al., 2012; Ryan & Warner, 2012).

Last, schools are a primary setting in which youth display impairment (Ginsburg, Becker, Kingery, & Nichols, 2008). School-based interventions provide a real-world setting for treatment implementation that provides the opportunity to generalize skill use by practicing and fostering growth in the very situations that reflect difficulty for the child. The environment provides opportunities for exposure to commonly avoided situations (e.g., answering questions in class, eating in the cafeteria, speaking with teachers, initiating conversations with unfamiliar peers) and repeated access to these stimuli for practice and generalization with intervention supports. For example, peers and teachers with whom students experiencing social anxiety routinely associate can be enlisted for support and help process problematic situations in the environment in which the anxiety is being experienced (Ryan & Warner, 2012).

Given the advantages of school-based treatment, several researchers have conducted reviews on treatments for children and youth with anxiety to identify strengths and limitations of school base supports. Review of the literature on this topic will be discussed in the following section.

Cognitive Behavior Therapy Treatment Outcomes

Approximately 60-65% of youth with anxiety disorders who are treated with CBT, either in a group or individual clinic settings, show a meaningful reduction in anxiety symptoms following treatment (Kendall, Hudson, Gosch, Flannery-Schroeder, & Suveg, 2008; Storch et al., 2007, Walkup et al., 2008). Overall, CBT can be considered a well-established treatment for reducing childhood anxiety symptomatology broadly. CBT

is an approach that is built on the premise that physiological, behavioral, and cognitive factors all play a role in a child's distress (Kendall & Hedtke, 2006). Therapy is derived from the idea that there is a relationship between cognitions, feelings, and behavior. For example, how one thinks about a particular situation affects how one feels and behaves. Having irrational worries and thoughts about certain situations can trigger physiological arousal that may lead to avoidant behaviors to suppress the worrying. The goal of CBT is to not "cure" anxiety but rather to teach youth adaptive ways to manage or reduce it. Therapy targets anxiety reduction by teaching how to recognize bodily cues and anxious feelings, use relaxation strategies, utilize problem-solving skills, and other ways to deal with anxiety-related thoughts when in the presence of an anxiety related stimulus. New skills are taught to understand how thoughts contribute to anxiety, how to modify distorted thinking and replace with positive self-statements, and how to develop a coping plan to deal with anxiety in the future. Skills are then put to use by being in the presence of the anxiety-provoking stimuli and using a gradual exposure strategy to develop skills needed to reduce and better cope with the anxiety.

One treatment in particular that has been well researched in a clinical setting with children and youth is the Coping Cat program. The first randomized clinical trial (RCT) examining the effects of the Coping Cats program on anxiety by Kendall (1994) found that 64% of the children ages 9 to 13 ($N = 27$ who received treatment with $N = 20$ waitlist control children) had their anxiety decrease from baseline levels. These results were maintained at a 1-year follow-up. Similar positive findings on anxiety reductions were also noted in a second RCT by Safford, Kendall, Flannery-Schroeder, and Webb (2005)

with 70 children ages 9-13 who showed maintained reduction at a 7.4-year follow-up measured by diagnostic status, child self-reports, parent and teacher reports, and behavioral observations. A third RCT (Kendall et al., 2008) found similar results indicating an overall decrease in reported anxiety levels after a completion on a CBT group. Overall, these and similar studies document the efficacy of using CBT to treat youth with anxiety disorders. When judged according to the criteria for an empirically supported treatment (EST; Chambless & Hollon, 1998) the literature provides such an endorsement (Silverman, Pina, & Viswesvaran, 2008).

Although research outcomes on anxiety treatment in the school setting are limited, results from several studies suggest that CBT can be an effective treatment for some children exhibiting anxiety when implemented in schools (Ginsburg & Drake, 2002; Warner et al., 2005). A meta-analysis of 7,877 students (kindergarten-12th grade) participating in a CBT anxiety intervention studies conducted within the school settings to prevent or reduce presenting anxious or depressive symptoms was reviewed (Mychailyszyn et al., 2012). Of the 64 included studies, 34 studies were early or universal prevention, 8 were selective prevention, 6 were indicated prevention, 5 were targeted prevention, and 11 were treatment studies. For the studies evaluating school-based interventions for anxiety, the summary pre-post effect size estimate was .50 for reducing anxious symptomatology. Of those studies, 22 included control conditions, for which the summary pre-post effect size estimate was .22 regarding a decrease in anxiety symptoms over time. A significant difference between the treatment and control conditions were found in all of these studies, demonstrating greater reductions in anxious

symptomatology from baseline to post-intervention for those in the treatment groups compared to the controls.

There were five anxiety intervention studies that were reviewed that assessed outcomes three months after the end of the intervention. For these trials, there was a moderate mean effect size (.67) between baseline and 3-month follow-up. Two of these studies had baseline and 3-month follow-up data for youth in the control conditions, for which there was a non-meaningful mean effect size of .09. The direct comparison demonstrates that youth receiving interventions experienced significantly greater reductions in anxious symptomatology from baseline to 3-month follow-up than did youth in the control conditions.

There were seven anxiety intervention studies that assessed outcomes at 6-month follow-up, and four that assessed outcomes at 12-month follow-up. Direct comparison, however, indicated that there was no significant difference in anxiety reduction from baseline to 6-month or 12-month follow-up between youth receiving interventions and those assigned to control conditions.

This meta-analysis also found that universal interventions had an effect size of .32 but selective and treatment interventions had a much higher effect sizes of .53 to .71 respectively. Further comparison analysis of age, gender, and intervention agent (school staff or researcher) showed similar reductions in anxiety levels for universal interventions. Moreover, low dose interventions (354 min) were just as effective as high dose interventions (682 min). In sum, most studies have targeted universal prevention, and although intervention resulted in reduced reports of anxiety symptoms, reductions

were not maintained over time. Moreover, there is limited information relating to functional change such as academic or social performance or reduced avoidance of important activities in school settings.

CBT has been shown to be effective in a clinical setting, with promising evidence in the school setting as well. However, transporting CBT to the schools can pose some challenges. Modifications have been suggested by Beidas and Kendall (2010), to the Coping Cat treatment, but nevertheless, require research evaluation. The suggested adaptations focus on treatment features (e.g., scheduling sessions) rather than treatment content. Some of these modifications included changing from 50-minute weekly sessions to 30-minute weekly sessions, focusing on one activity per lesson, and reducing 16 sessions to eight sessions, with the first four being psycho-education, and the last four exposure tasks (Kendall et al., 2009).

Mychailyszyn et al. (2011) also discussed several challenges to implementing CBT in school settings that include case load restrictions, staff training, loss of academic time, and scheduling constraints in the schools. Implementation of programs does not come without financial cost. If this cost is removed from the parents' burden of responsibility, the school will have to find funds within its budget. Given the increased demands on schools coupled with decreased budgets, potential resistance from school personnel is inevitable and must be addressed. Additional concerns include not having enough time to reduce the child's anxiety before returning to the classroom, and the logistics of conducting exposure tasks in schools. Several researchers question what interventions can be effectively implemented with adequate personnel and circumstance

fitting to the school with diverse populations (Schoenwald & Hoagwood, 2001).

These are challenging questions for researchers and school mental health workers alike and have yet to be sufficiently answered. Despite these concerns and possibly others, the more important message to deliver to parents and teachers is that anxiety left untreated can continue to burden a child for many years and place them at risk for a host of negative life outcomes (Woodward & Fergusson, 2001).

Change in Social Outcomes in School Settings

In a summary article on treatment of anxiety, Kendall et al. (2012) report that there is a 60-65% decrease in anxiety symptoms for those children treated with CBT that corresponds with a decrease in negative automatic thoughts and an increase in their ability to control their anxiety.

The literature is inconsistent when trying to determine which components are necessary to include in an evidence-based treatment for youth with social anxiety. Beidel, Turner, and Morris (1999) found that interventions for social anxiety disorder that emphasize exposure and social skills are efficacious. Others suggest that targeting social skills is important, although it is not fully understood if socially anxious youth have any actual skill deficits since many existing studies (Beidel et al., 1999; Cartwright-Hatton, Tschernitz, & Gomersall, 2005; Spence et al., 2006) lack extensive observations of social interactions. Warner et al. (2007) examined the effects of treatment targeting the implementation of coping skills (e.g., relaxation) as compared to treatment including psychoeducation, social skills training, cognitive restructuring, exposure and peer support

with 36 students, ranging in age from 14 to 16. Results showed that 59% of participants in the treatment group ($n = 19$) no longer met criteria for social phobia, compared to 0% in the controlled only teaching coping strategies group ($n = 17$).

The recently evaluated Skills for Academic and Social Success (SASS) program focuses on psycho-education, realistic thinking, social skills training, exposure, and relapse prevention. An evaluation of the SASS program in the school setting ($n = 42$; grades 9th to 12th) with students who met criteria for a social anxiety disorder has demonstrated that 67% of the treatment group ($n = 35$), compared to only 6% of the control group, no longer met criteria for a diagnosis of social phobia at posttreatment (Storch & Warner, 2004). These results were obtained using independent evaluator ratings, self-report inventories, and parent ratings.

Results from another study specifically targeting children with SoP in the school setting showed that by posttreatment, 59% of youth ($n = 36$) treated with the SASS program compared to 0% in an attention-group no longer met diagnostic criteria for SoP (Warner et al., 2007). The treatment lasted for 12 weeks, with 40-minute group lessons a week. The program also included parental components and two social events implemented with pro-social school peers. These results were obtained by independent evaluations, adolescent self-report, and parent report and the decrease in rated social anxiety was maintained at 6-month follow-up. The strength of these results may be attributed, at least in part, to the real world context in which the program was delivered. However, limited information on behavior change in social situations was reported. Given change in social outcomes among anxious youth varies, more research is

warranted to confirm long-term social outcomes for children with socially anxious behavior.

Several reviews of CBT literature suggests that a common thread throughout all of the successful CBT programs included child or youth engagement in hierarchy-based exposure tasks (Kendall et al., 2005). The general features of exposure tasks include creating a hierarchy of least to most anxious situations and then practice using coping skills taught in prior CBT sessions starting with a lower level situation. Subjective units of distress are assessed during imaginal and in vivo exposure, in and out of session exposure tasks, and followed by rewards for effort (Kendall et al., 2005). Once anxiety levels decrease in a lower level situation, a higher level is selected as an exposure task. Despite the accepted importance of exposure tasks when treating anxious youth, there are very little researched guidelines about procedures used during exposure tasks in social situations (Kendall, Settapani, & Cummings, 2012). It seems as though there are several different components of CBT that have been used to address children with social anxiety, but more research is warranted to determine which components are necessary and effective. Given the social nature of school interactions with peers or teachers, research is needed on efficient yet effective exposure tasks, possibly with social skill training, for students exhibiting social anxiety symptoms in the school setting.

Limitations of Current Studies

Results of the meta-analysis conducted by Mychailyszyn et al. (2012) suggests that effects of interventions conducted in schools to address childhood anxiety are not

maintained over time, regardless of duration. By 12-month follow-up, youth receiving anxiety interventions do not exhibit significantly greater reductions in symptomatology from baseline than controls. This review also found that the description of program leader training was inconsistently reported and vaguely described across studies. This makes replications difficult to know who should be giving the treatment, with what training, and under which circumstances for students presenting with at-risk or more severe symptoms.

A limitation of most programs used in schools to date is that they have been primarily delivered in English language and developed based on white, middle-class populations. Given that most of the results are based on this populations' response to treatment, it is inaccurate to generalize these findings to other cultures. More research is needed targeting specific populations to gain more information about how certain populations respond to different types of treatment. Given the lower response of students with presenting social concerns, Kendall, Safford, Flannery-Schroeder, and Webb (2004) also suggests that further examination of potential variables that may influence treatment outcomes in school settings such as generalization strategies, peer mediation, therapy process variables, and level of child or teacher involvement is needed.

Finally, it is recommended that future studies go beyond paper-and-pencil questionnaires to determine whether interventions are leading to change in *functional* outcomes and quality of life (Chambless & Holon, 1998; Mychailyszyn et al., 2102). The integration of mental health education and coping strategies into the curriculum may also be beneficial. A short-term intervention may not be enough to execute a skill that will be used over time. Such efforts could be led by school staff, thus facilitating sustainability,

and achieving a meaningful step in school efforts to address mental health.

Conclusion

CBT has been shown to be an effective treatment for youth with anxiety disorders, but given the current state of the literature on school-based treatment for children experiencing anxiety that is interfering with social outcomes, more research needs to be done. The purpose of this study was to incorporate the most salient features of previous research into a school-based treatment for anxious youth experiencing social difficulties in the most feasible and effective way possible, by focusing on improving positive peer contacts. The present study developed a school-based treatment to effectively increase the functional social behavior of elementary-aged students who were at-risk or clinical levels of anxiety. Intervention strategies included components of psycho-education, relaxation, positive thinking, coping skills, problem-solving, and emotional regulation. These were administered in four 30-minute sessions with a strong focus on identifying how the subject matter relates to the school setting (role plays regarding classroom experiences, recess, and peer communications). Exposure has been shown to be one of the most important and central treatment techniques utilized for anxiety disorders. Exposure is simply encountering, experiencing, or interacting with a fear stimulus purposefully and without escaping until the fear response has diminished. Therefore, the second half of treatment focused on exposure-related tasks during recess that gradually addressed the child's anxiety. Several social skills were selected based on the child's assessment of social skills at the beginning of treatment and gradually were

taught and practiced during thea recess exposure session. It was hypothesized that there would be an increase in positive peer interactions for the target student, as well as a decrease in anxiety ratings regarding social situations. Given this hypothesis, the following research questions were of primary interest in this study.

1. What is the effect of a brief CBT exposure-based social skill training recess intervention on positive peer interactions of anxious elementary students?
2. What is the effect of a brief CBT exposure-based social skill training recess intervention on subjective ratings of distress of anxious elementary students?

CHAPTER III

METHODS

Setting

This study took place at a public elementary school in a western state. The school population was approximately 650 students from kindergarten through sixth grade and consisted of 7.4% Hispanic or Latino, 0.3% Asian, 0.4% Black, 0% Hawaiian or Pacific Islander, 1.7% American Indian or Alaskan Native, 5.3% multiple races, and 84.9% White. Approximately 31% these students qualified for federal free and reduced lunch programs and 11.4% for special education services.

Experimental sessions were conducted in a small office with one table and all four participants present. Four treatment sessions were completed with all participants for the first portion of the study by the primary researcher, a graduate student in the EdS school psychology program. The second portion of the study treatment sessions occurred with two of the participants at a time at recess in the presence of classmates and other peers at recess, along with the primary researcher. “Recess” could include the playground, the grass field where free play occurred, or the blacktop where structured games were taking place.

Participants

Participants included four White students who were in third-grade general education classrooms; however, one of them did spend some time in the resource

classroom for academic support. All participants were nominated by their teacher as a student who was typically withdrawn and experiencing anxiety that negatively impacted their social situations. They were also identified as meeting the following criteria: (1) are between ages 8-12 in grades 3-6, (2) obtained a score that falls within at-risk or clinical range of anxiety on anxiety scale, (3) had below 60% of positive interactions with peers during two 10-minute recess observations (described below), and (4) had teacher or parent-report anxiety that is interfering with social or behavioral functioning at school. A description of the four participants follows.

Alex, an 8-year-old White male, was referred for having low social skills and high problem behaviors that were occurring daily. His teacher reported he was struggling in the areas of social skills, problem-solving skills, emotional regulation skills, and coping skills, but had strengths in his confidence in himself and social support from home. According to the MASC, Alex reported feeling afraid that other people will think he is stupid, worrying about doing something stupid or embarrassing, getting nervous about performing in public, and having trouble asking other kids to play. He was observed as having an average of 34% positive peer interactions across several recess observations.

Brennan, an 8-year-old White female, was referred as having no friends. Her teacher reported she was struggling with negative self-talk, social skills, problem solving skills, emotional regulation, coping skills, and a lack of social support at home. There were also large concerns with her academic skills. According to the MASC, Brennan reported feeling worried other people would laugh at her, afraid that other kids will make fun of her or think she is stupid, worried about what people think of her, nervous about

performing in public, worried about doing something embarrassing, and feeling shy. She was observed having an average of 12% positive peer interactions across several recess observations.

Chris, an 8-year-old White male, was referred as having limited social interaction with same age peers and high problem behaviors within the classroom. The teacher reported problems with social skills, problem-solving skills, emotional regulation, coping skills, and negative self-talk but had strong parent support. Chris reported feeling “awkward” when talking with his same age peers and that he felt no one liked him. According to the MASC, he reported feeling worried people will laugh at him, afraid that other kids will make fun of him, worried about what others think of him, avoiding things that make him upset, worrying about doing something stupid or embarrassing, and having trouble asking other kids to play with him. He was observed as having an average of 38% positive peer interactions across several recess observations.

Dale, an 8-year-old White male, was referred as having limited social skills. The teacher reported he had extreme difficulty with social skills and negative self-talk, with moderate difficulties in emotional regulation and problem-solving skills, he had a strength in social support at home, as well as some coping strategies he had learned previously. Dale reported having the most difficulty with answering questions in class and playing with other students who he does not know. According to the MASC, he reported feeling worried people would laugh at him, getting shaky and jittery, afraid that other kids will make fun of him, worry about getting called on in class, afraid that others will think he is stupid, feeling weird, try to do things other will like, worried about what

people think of him, feeling restless and on edge, worried about doing something stupid or embarrassing, getting nervous about doing something in public, feeling sick to his stomach, having trouble asking others to play with him, and feeling shy. He was observed as having an average of 42% positive peer interactions across several recess observations.

Measures

Primary dependent variables measured during recess observations were the observed social behaviors between target student and peers and the target students' self-rated Subjective Units of Distress (SUDS) level. Secondary variables were student self-rated levels of anxiety symptoms on MASC, social skills on the SSIS and teacher/student interview, and treatment acceptability on the CIRP. All variables are described in Table 1.

Child Demographic Form

A demographic form (Appendix A) was constructed to collect basic child information for the participants' parents. Information gathered included: gender, age, grade, school supports, and school classifications (e.g., special education, English language learner, etc.) and whether the child has, or is currently receiving any psychological service for anxiety and using any medication.

Teacher and Student Functional Assessment Interview

A modified version of the Problem Identification teacher interview (Appendix B) (Bergan & Kratochwill, 1990) was used to identify anxious situations and anxiety related

Table 1

Descriptors of Measures

Measure	Frequency	Rationale
Teacher & Student Functional assessment Interview	Pretreatment	To estimate type, severity, and frequency of problem social withdrawal & Identify antecedents and functions of behavior
Social Skills Rating System (SSRS)	Pretreatment, postttreatment	To screen for significant social skill deficits and to identify areas for intervention supports
Multidimensional Anxiety Scale for Children (MASC)	Pretreatment, postttreatment	To quantify self-rated perceptions of anxious related behaviors in participants
Direct Behavior Observation	Pretreatment, baseline, psychoeducational sessions, exposures sessions & Postttreatment	To monitor number of positive peer contacts
Subjective Units of Distress (SUDS)	Baseline, psychoeducational sessions, exposure sessions, and postttreatment	To monitor change in reported anxiety during difficult social demands
Child Involvement Rating Scale (CIRS)	Postttreatment	To quantify the participants' activity level in treatment
Child Intervention Rating Profile (CIRP)	Posttreatment	To quantify the participants' perception of the helpfulness of treatment

behaviors that occur in the school setting. Information gathered was used to estimate (1) type, severity, and frequency of problem social withdrawal or excess behaviors, (2) social antecedents associated with anxiety, (3) maintaining anxiety variables such as teacher attention, peer attention, social avoidance when displaying anxiety behaviors, or prevention of negative events, and (4) current abilities to manage anxiety.

Observed Social Behavior

Three types of social behavior were directly observed during recess between

student and their peers including positive interactions, negative interactions, and alone. Specifically, the social interactions are defined as follows: (1) positive interactions, in which at least one peer participant talked, played, or cooperated during a game with a target participant; (2) negative interactions, in which either peer or target participants yelled at, argued with, became aggressive towards, refused to share materials with, or broke game rules while interacting with each other; and (3) alone interactions, in which a target participant was not within five feet of any peer participant or engaged in parallel play (i.e., he or she engaged in similar activities as the peer participant while standing in close proximity, but did not interact either verbally or nonverbally). These behaviors were recorded using a modified version of the Peer Social Behavior Recording Form provided in the Systematic Screening for Behavior Disorder Manual (Appendix F) (SSBD; Walker & Severson, 1992).

Direct observation of behavior was conducted during recess to estimate the type and percentage of time that positive peer interactions were demonstrated between the student and same-aged peers. Social interaction behaviors observed were measured for ten-minute sessions using a 5-second momentary time sampling procedure to obtain estimates of behavior rate and duration (Harrop & Daniels, 1986). At the end of each 5-second observation interval, the primary researcher looked at the target participant and recorded on the Direct Social Observation Recording Form whether the target participant received a positive or negative interaction with one or more peer participant, or if he or she was alone. Only one behavior was recorded for each interval. It should be noted that if a positive and negative interaction occurred during the same interval, the interval was

coded as negative. The percentage of intervals that the target student spent engaging in negative, positive and alone interactions per session was calculated by dividing the total number of intervals observed by the number of intervals that a specific behavior was observed and multiplying the result by 100.

Subjective Units of Distress (SUDS)

This measure was used to frequently assess students' self-reported feelings of anxiety. A Feelings thermometer (Appendix D) was used to have participants rate how he/she felt about certain situations on a scale from 0 (relaxed/happy) to 8 (hysterical/enraged). Although studies were not specifically designed to investigate the psychometrics of the SUD, results from the treatment studies with adults showed significant negative correlations between the SUD ratings and implementation of the CBT program, such that levels of anxiety decreased with increased anxious provoking situations (Kaplan, Smith, & Coons, 1995). Significant correlations have also been found between SUD ratings and other anxiety measures including pulse and hand temperature (Thyer, Papsdorf, Davis, & Vallecorsa, 1984); Multiple Affect Adjective Check List ($r = .53$); State-Trait Anxiety Inventory ($r = .69$; Kaplan et al., 1995); and Global Assessment of Functioning (GAF) Scale ($r = -.45$). Benjamin et al. (2010) examined change in 91 youth (ages 7-14) SUD ratings of anxiety with CBT treatment using the 0 to 8 scale. There was a significant change with reduction in peak ratings per session with additional exposure-based sessions, $t(91) = 2.27, p < .05$. These results also suggested that the child age, gender, and level of functioning, or diagnosis severity did not predict the expected SUDS pattern.

Social Skills

The Social skills rating system (SSRS) was used to screen the students (ages 8 to 18) for significant social skill deficits and to offer support in the development of interventions for those found to display significant social skill impairments (Gresham, Elliot, Vance, & Cook, 2013). This measure elicits standard scores in three domains: social skills (communication, cooperation, assertion, responsibility, empathy, engagement, and self-control), problem behaviors (externalizing, internalizing, hyperactivity/inattention, autism spectrum, and bullying), and academic competence (reading, math, motivation, parent support, and general impressions of cognitive functioning). Rating options range from 1 (never) to 4 (almost always). The SSRS results in a standard score of 100 with a standard deviation of 15; higher scores indicate higher levels of social competence. Gresham et al. (2013) report a test-retest correlation of .81 (teacher form) and .71 (student form). Validity studies were conducted with various relevant scales including the Behavior Assessment System for Children-2nd Edition (BASC-2; and the Vineland Adaptive Behavior Scale-2nd Edition. The results are quite encouraging and support the current validity. For the purpose of this study, only the social skills subscale was administered and scored. Social Skills measures communication, cooperation, assertion, responsibility, empathy, engagement, and self-control.

Multidimensional Anxiety Scale for Children (MASC)

The MASC is a 39-item standardized, general measure that assesses anxiety

symptoms on four broad domains; physical symptoms, social anxiety, harm avoidance, and separation anxiety. The MASC has satisfactory to excellent internal consistency (i.e., Cronbach's $\alpha = .90$, range .60-.90; March et al., 1997) and test-retest reliability (i.e., single-case ICC = .65 at 3 weeks and .87 at 3 months; means ICC = .79 at 3 weeks and .93 at 3 months; March et al., 1997), and adequate convergent and divergent validity, as assessed using a sample of children ages 8-16 years (March et al., 1997). The MASC has a high level of discriminant validity, demonstrates stability over time in population and clinical samples, and provides normative data, which helps establish when children have returned to a normal range of anxiety. The MASC has also been shown to be treatment sensitive in studies of childhood anxiety (e.g., Compton, Burns, Egger, & Robertson, 2002). There is a MASC total score as well as three subcategory scores, physical symptoms, harm avoidance, and social anxiety. The scores are reported as a t-score, with a mean of 50 and a standard deviation of 10. A t score greater or equal to 65 is considered clinically significant, with treatment response typically defined as return to normal range (e.g., less than 60).

Child Involvement Rating Scale (CIRS)

The CIRS (Appendix C) is a 6-item rating scale of child participation in a group therapy session. The items are rated on a 6-item scale for 0 (not at all present) to 5 (a great deal present). Chu and Kendall (2004) reported acceptable internal consistency (Chronbachs alpha = .73) and a modest test-retest reliability (ICC = .59) with the 6-item version of the scale. The 6-item scale has the following four positive involvement items (a) "Does the child initiate discussion or introduce new topic?" (b) "Does the child

demonstrate enthusiasm in therapy related tasks?” (c) “Does the child offer information about self (self-disclosure)?” and (d) “Does the child elaborate on points made by the therapist of demonstrate understanding?” The negative involvement items are (a) “Is the child with drawn or passive (e.g., not responding to therapist)?” Three additional items (two positive and one negative) were added for this study; (a) “Does the child engage in conversations with the other group participants in ways that are relevant to the group process?” (b) “Does this child elaborate on points made by other group participants?” and (c) “Is the child passive or withdrawn with regards to other group participants?”

Child Intervention Rating Profile (CIRP)

The CIRP (Appendix E) was used to assess student’s subjective perception about how acceptable and helpful the treatment program was for improving the problem. The scale consists of 7 items rating on a Likert scale ranging from 1 (“ I disagree very much”) to 5 (“I agree very much”). Items are summed as the total score (range= 1-35), with scores in the higher range representing a more appropriate and effective program. Turco and Elliot (1986) found the total score to have good reliability (Cronbach’s alpha = .86).

Design

An AB design was used to evaluate the effects of a brief CBT exposure intervention on peer interactions and self-rated anxiety symptoms of students who had at-risk or clinical levels of anxiety affecting their social behaviors. The treatment phase consisted four psycho-education lessons given to all four students together followed by exposure training sessions during recess in groups of two. An AB design was used

because it allowed for a comparison of treatments to be evaluated when target behaviors were likely to be irreversible with a treatment withdrawal because of irreversible learning or contact with natural reinforcing contingencies.

Procedures

Recruitment and Participant Selection

Several steps were taken to identify the target participants. First, teachers of third through sixth grade responded to a request to identify students who were exhibiting socially anxious behaviors (Appendix G). Of the 13 students from 6 classrooms that were initially referred, five students were already receiving special education services for behavior difficulties related to anxiety. Observation of the eight remaining referred student's social interactions confirmed low levels of positive peer interactions for four students at 60% or less. The observed interactions fell below norms of elementary students reported in the Systematic Screening for Behavior Disorders Manual (Walker & Severson, 1992) showing typical social engagement ranging from 65-79% for boys and girls between 1-6 grades. These four students were given a packet containing an explanation of the study with an attached form to obtain informed consent (Appendix H), a demographic form, and a return envelope, to take home to their parents. Parents were called by the primary researcher to explain the study rationale, risks and benefits, and procedures of the study the day before the packet was to be sent home. All four students returned the parental agreement for their child's participation and child demographic form in a sealed envelope within 1-week of it being sent home. For teacher consent, the primary researcher met

with the general education teachers of these four students to discuss the benefits of training and in order to get their verbal consent to pull these students out of class periodically to participate in the training. Following consent, students completed self-ratings, and all four participants fell in the at-risk range for anxious symptoms on the Multidimensional Anxiety Scale for Children (MASC). At this time students were also asked if for their assent in participating in a group to help with self-reported anxiety symptoms, to which they all agreed. No student was using anti-anxiety medication treatment and participating in any current treatment for anxiety.

Preassessments

After parental consent and student assent were obtained, the student completed the MASC and SSRS. The primary researcher also met with the general education teachers to: (a) discuss the intervention timeline and how it would be implemented, (b) administer a teachers' interview about social behavior concerns for the particular student, and (c) complete a teacher form of the SSRS. A student and teacher interview (Appendix K) were then conducted to gain more information and to determine in which ways their anxiety affected their social behavior. This information was used for creating specific scenarios to include in psychoeducation lessons to increase generalization of skills. Four social skills most likely to contact, maintain, and reinforce peer interactions per student were selected based on teacher and student rating.

Baseline

During baseline, data were collected for each target student to assess his or her

trends in positive peer interactions and SUDS level during recess. No training or intervention was implemented.

Cognitive Behavioral Training

Following the baseline data collection, the treatment phase commenced and consisted of two components. First, the four participants received four psychoeducation lessons together as a group to learn concepts and skills. Second, the participants received paired exposure training at recess to practice skills during endorsed anxious social events. The review of CBT literature shows that a common thread throughout all of the successful CBT programs is that they each include engagement in hierarchy-based exposure tasks (Kendall et. al., 2005). Each step is described below.

First, four psychoeducation lessons were administered by the primary researcher under the supervision of a Ph.D. level licensed psychologist. These lessons lasted approximately 30 minutes each and were held once a week. Concepts and modified procedures were used from three programs: FRIENDS (Lowry-Webster, Barrett, & Dadds, 2001), Worried No More (Wagner, 2002), and Coping Cat (Kendall & Hedtke, 2006). Basic psycho-education and skills were taught to the group including learning how worry works, emotional body cues and regulation, how to normalize anxiety, positive thinking, and cognitive restructuring. The primary researcher taught through direct instruction, modeling, role plays, prompts, feedback, praise, and practice with both peers and the researcher as means to understand lesson materials. To increase behavior change, students were asked to demonstrate the skill both through role-plays and during games while receiving praise and feedback.

Following the psychoeducation lessons, the participants and researcher developed a hierarchy (Appendix I) of least to most anxious situations to select situations to practice skill acquisition at recess. Example situations included making new friends, asking to join in a game, suggesting an activity, introducing yourself, dealing with anger, and responding to teasing. A coping/problem-solving plan (Appendix J) was developed with the primary researcher and each participant individually to be used during the second half of the treatment phase. Coping strategies added to the plan were taught during the lesson such as CALM breathing, mapping out choices, driving over the worry hill, checking in on your worry, using positive thinking, and being proud of efforts.

After developing the hierarchy and coping plan, exposure recess practice training sessions were implemented. During this training, each participant was paired up with another participant working on the same skill, and was pulled out of class five-minutes prior to recess to practice a low teacher-rated social skill that was needed in order to overcome an anxious event. The student hierarchy list was used to practice skills from least to most anxiety-provoking situations. The primary researcher used direct instruction to teach skills. Direct instruction included: (1) the model of the specific skill while thinking aloud how to use the CBT steps listed on the coping/problem solving map that was created during the first part of treatment, (2) the participant role-playing the skill with feedback from the primary researcher, and (3) students identified one coping skill that they could use when feeling anxious during the practice. The specific social skill steps for each selected skill was taught using Skill Streaming the Elementary School Child (McGinnis, Sprafkin, & Goldstein, 2012). During the 10-minute observation, the

primary researcher would record how many positive peer interactions and peer contacts a student exhibited similar to behavioral observations done at baseline. After the 10-minute observation, the primary researcher and student would discuss what worked or did not work, earn praise, review coping strategies, and complete a SUDS rating.

As noted in the assessment section, each student’s training was individualized to target specific social skills and coping skills that fit student’s needs. Table 2 presents each participants’ anxious event targeted and social skills taught. Coping skill strategies were taught in a manner to address identified events and social skills during lessons and the four exposure-based sessions.

Post and Follow-Up

Immediately following the fourth exposure-based recess practice session,

Table 2

Individualized Exposure Trials with Specific Social Skill Target and Coping Strategies

Name	Targeted anxious event (least to most anxious rating)	Social skills
Alex	1-Introducing yourself 2-Joining in 3-Playing a game 4-Suggesting an activity	1-Walk up to person 2-“Can I play too?” 3-Ask how to play 4-Use a friendly voice to suggest a game to play
Brennan	1-Introducing yourself 2-Joining in 3-Playing a game 4-Suggesting an activity	1-Walk up to person 2-“Can I play too?” 3-Ask how to play 4-Use a friendly voice to suggest a game to play
Chris	1-Introducing yourself 2-Joining in 3-Dealing with your anger 4-Responding to teasing	1-Saying “hi” to a new friend 2-Saying “can one more person play” 3-take a break 4-Ignore and walk away
Dale	1-Introducing yourself 2-Joining in 3-Dealing with your anger 4-Responding to teasing	1-Saying “hi” to a new friend 2-Saying “can one more person play” 3-take a break 4-Ignore and walk away

participants were asked to complete the CIRP. At that time, no training was implemented. During this condition, researchers observed percentage of time in positive peer interactions at recess multiple times after treatment using similar procedures in baseline conditions for 3 weeks. At the end of each observation, students completed a SUDS to record anxiety levels during the observation.

CHAPTER IV

RESULTS

The effects of the intervention phase on positive peer interactions and student distress ratings were assessed using visual inspection of the time-series data as well as a comparison of mean percentage scores for all subjects for each experimental (Scruggs, Mastropieri, & Casto, 1987). Descriptive statistics for each student per experimental phase are presented in Table 3 for student SUDS ratings and peer interactions observations. Effect sizes were calculated as Cohen's d commonly used in repeated measures studies and interpreted as $d = 0.2$ small, $d = 0.5$ medium, and $d = 0.8$ large (Cohen, 1988). Differences between baseline and the treatment condition are discussed below using visual inspection of the time-series data for significant changes in the level, trend, and variability within and between conditions.

Positive Interactions and SUDS Rating

Figure 1 depicts the percentages of time during which each target participant exhibited positive peer interactions as well as each participant's self-rated SUDS level during baseline, recess exposure intervention, and follow-up. As shown in Figure 1, all students were positively interacting with peers at or below 60% for 90% or more of the baseline sessions. In correspondence with the low peer interactions, student SUDS ratings fell within the three lowest ranges of anxiety (i.e., 1 to 4) with a rating of eight as the highest anxiety level.

When the first recess exposure training was introduced, the level of positive peer

Table 3

Descriptive and Effect Size Statistics for Student Distress (SUDS) and Percentage of Time in Positive Peer Interactions

Participant	Descriptor	Subjective units of distress (1 to 8)			% of time in positive peer interactions		
		Baseline	Training	Follow-up	Baseline	Training	Follow-up
Chris	Mean	1.3	2.3	1.3	38.3	66.8	76.4
	<i>SD</i>	0.5	0.5	0.5	6.2	14.2	12.5
	Effect size <i>d</i>		2.0	0.1		4.6	6.1
	Minimum	1.0	2.0	1.0	33.0	47.0	60.0
	Maximum	2.0	3.0	2.0	50.0	80.0	100.0
Alex	Mean	1.0	2.0	1.3	34.1	85.0	75.8
	<i>SD</i>	0.0	1.2	0.5	22.4	11.5	7.4
	Effect size <i>d</i>		1.0	0.3		2.3	1.9
	Minimum	1.0	1.0	1.0	7.0	73.0	65.0
	Maximum	1.1	3.0	2.0	63.0	100.0	85.0
Dale	Mean	1.4	1.3	1.0	42.1	88.3	85.0
	<i>SD</i>	1.0	0.5	0.0	19.1	9.9	4.1
	Effect size <i>d</i>		-0.2	-0.4		2.4	2.2
	Minimum	1.0	1.0	1.0	0.0	80.0	80.0
	Maximum	4.0	2.0	1.0	60.0	100.0	90.0
Brennan	Mean	1.4	4.5	1.5	11.9	46.8	61.3
	<i>SD</i>	0.7	1.3	0.6	23.8	34.0	8.5
	Effect size <i>d</i>		4.4	0.1		1.5	2.1
	Minimum	1.0	3.0	1.0	0.0	0.0	50.0
	Maximum	3.0	6.0	2.0	80.0	80.0	70.0

interactions immediately increased for three students who remained interacting with peers at or above 65% for three or four sessions for Chris, Alex, and Dale. Distress ratings also increased with increased peer interactions. Brennan's interactions increased but interacted with peers more than 60% for only one session during the four observations. All students reported higher levels of distress with increased participation with peers. SUDS ratings increased for Chris, Alex, and Dale but remained at or below a lower anxiety level of three out of the eight ratings. Brennan's distress ratings decreased steadily over time during exposure training.

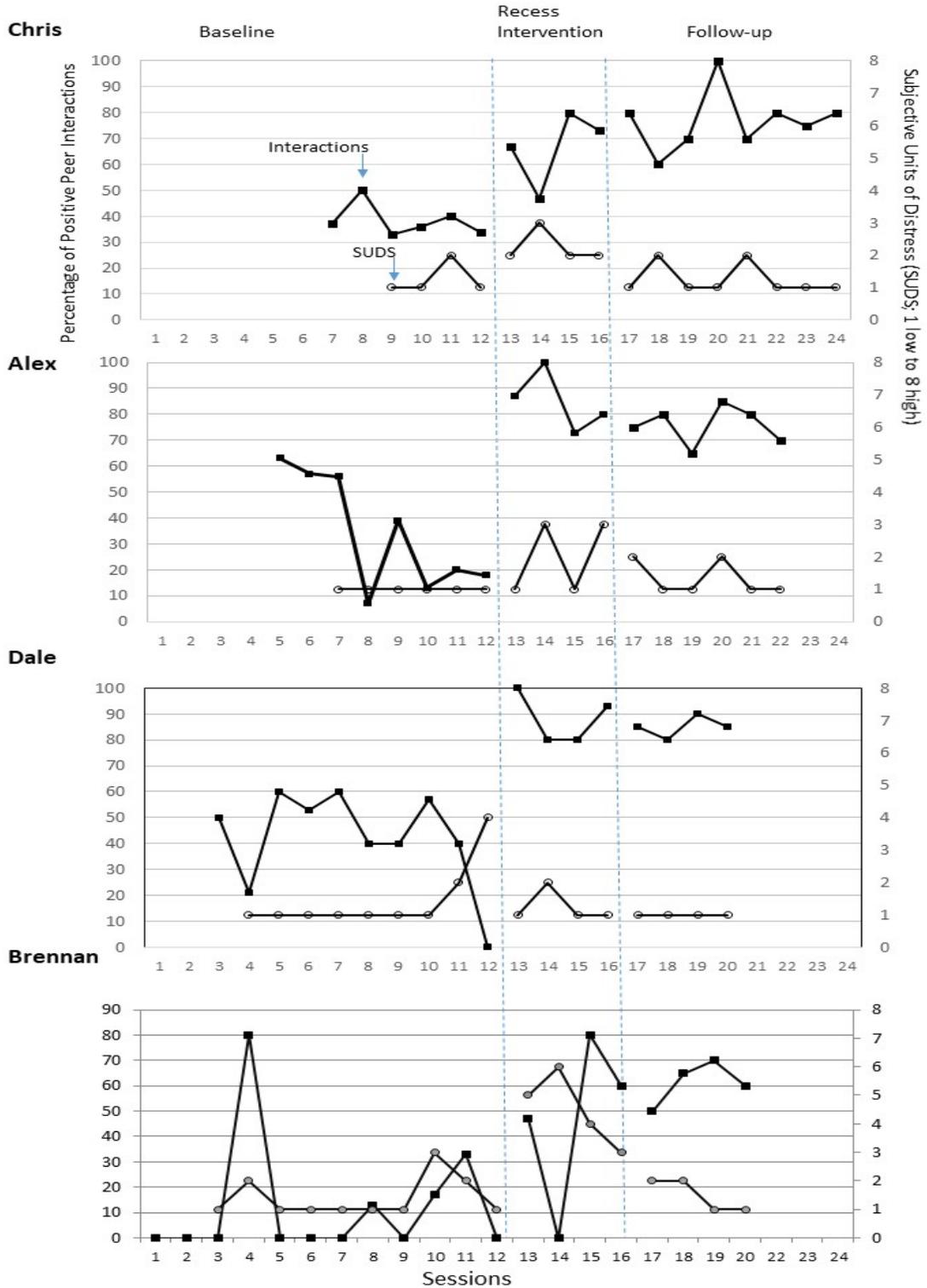


Figure 1. Student subjective units of distress ratings and percentage of time in positive peer interactions during baseline, cognitive behavioral training, and follow-up conditions.

Results during the follow-up session reveal that all students maintained higher levels of positive peer interactions relative to baseline. Again, with the exception of Brennan, students consistently interacted with peers at or above the SSBS norm (65-75%). Although Brennan showed an increase in positive interaction relative to baseline, performance ranged between 40% and 70%. All students SUDS level remained at or below the lower two distress rating. Overall, highest stress levels were reported during the exposure training session relative to baseline and follow-up. The highest percentage of time with peers was reported for all students during the follow-up condition.

Pre-Post Results

The MASC rating scale was used as a pre and post measure for all participating students. An overall pre and post total anxiety score was calculated as well as a score for each subdomain including (1) physical symptoms (tense/restless and somatic/autonomic), (2) social anxiety (humiliation/rejection and public performance fears), (3) harm avoidance (anxious coping and perfectionism) and (4) separation anxiety (Table 4). Figure 2 is a graphical representation of the Total and social anxiety pre and post intervention scores for each student. As presented in Figure 2, all four students showed a decrease in their self-reported anxious symptoms in both their overall anxiety score and their social anxiety score. When analyzing the total anxiety score, all four participants ratings fell in the clinical range prior to treatment, while only one remained in the clinical range after treatment had concluded.

Treatment Acceptability Estimates

The CIRP was used to assess participants' treatment satisfaction. The scores of all four participants for each statement on the rating profile indicated that students had differing opinions about whether the intervention was helpful (see Table 5). The CIRS was used to assess participation in treatment sessions as is also an indicator of student acceptability of the procedure (see Table 6).

Table 4

Multidimensional Anxiety Scale for Children (MASC) t Scores

Subdomain	Alex	Brennan	Chris	Dale
Total anxiety score (39 items)				
Pre	89 ^a	72 ^a	67 ^a	93 ^a
Post	63	55	57	74 ^a
Difference	26	17	10	19
Harm avoidance (9 items)				
Pre	65 ^a	55	59	63
Post	47	53	49	53
Difference	18	2	10	10
Physical anxiety (12 items)				
Pre	62	46	57	74 ^a
Post	57	46	55	65 ^a
Difference	5	0	2	9
Separation anxiety (9 items)				
Pre	89 ^a	80 ^a	59	75 ^a
Post	82 ^a	71 ^a	57	71 ^a
Difference	7	4	2	4
Social anxiety (9 items)				
Pre	76 ^a	79 ^a	70 ^a	81 ^a
Post	57	59	65 ^a	70 ^a
Difference	19	20	5	11

^aClinical

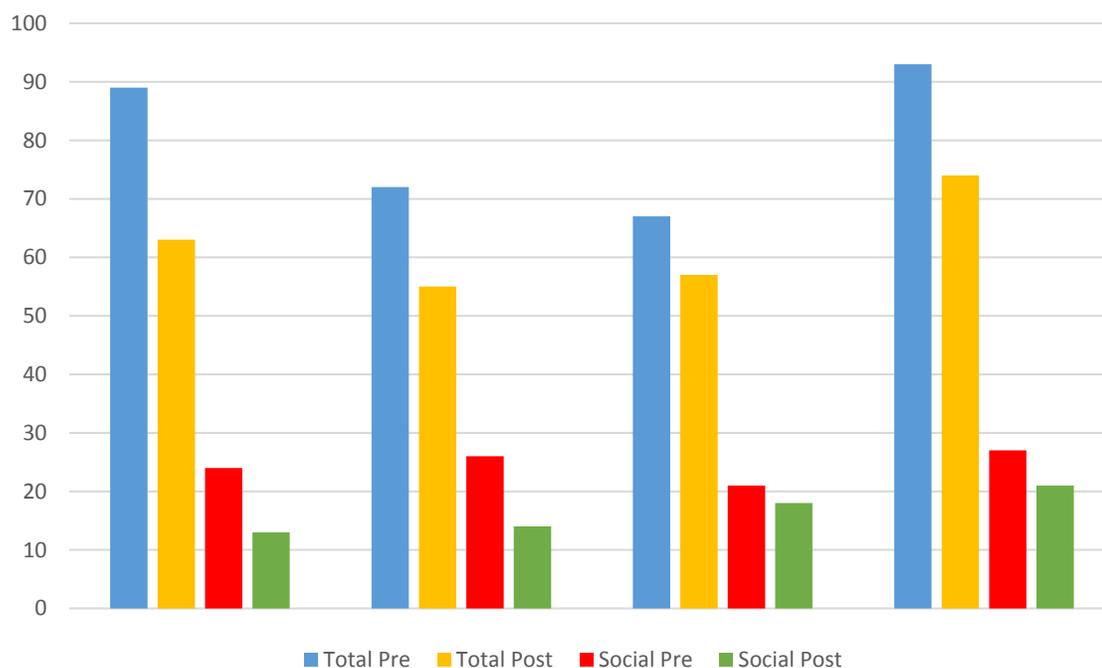


Figure 2. Total/social scores on Multidimensional Anxiety Scale for Children: Pre and post ratings.

Table 5

Scores for Participants Responses on the Children's Intervention Rating Profile

Item	Score			
	Alex	Brennan	Chris	Dale
The program used to deal with the problem was fair.	1	1	3	1
The program was too harsh (mean).	5	4	3	2
Using the program to deal with the problem might cause problems with my friends.	3	5	4	5
There are better ways to handle this problem.	3	4	2	4
Using the program would be good for other children.	3	1	3	1
I liked the program for handling this problem.	2	1	3	1
Using the program for this problem would help other children do better in school.	2	1	3	1

Note. Scale: 5 = "I agree very much" to "1 = I disagree very much."

Table 6

Scores for Child Involvement Rating Scale

Questions	Alex	Brennan	Chris	Dale
Does the child initiate discussion or introduce new topics?	5	0	0	5
Does the child demonstrate enthusiasm to therapy related tasks?	5	0	1	5
Does the child offer information about self (self-disclosure?)	5	3	4	3
Does the child elaborate on points made by the therapist or demonstrate understanding?	5	1	1	3
Is the child withdrawn or passive (e.g., not responding to the therapist?)	0	5	1	0
Is the child inhibited or avoidant in participation (e.g., not fully participating)?	0	5	1	0

Note. Scale: 1 = not at all present, 5 = A great deal present.

CHAPTER V

DISCUSSION

Considering that children who experience extensive amounts of anxiety or worry seem to struggle with social engagement, additional research on improving the use of social skills and coping strategies in order to overcome anxiety in social situations in the school setting is warranted. The findings of this study extend the research literature on anxiety in social situations and reducing its impact in the school setting. Specifically, the present findings indicate that a modified CBT anxiety treatment, paired with exposure training at recess, is effective in reducing overall reported anxiety (specifically reducing reported social anxiety) and increasing positive peer contact during recess time. All participating students showed improved positive peer interactions and reduced anxiety ratings compared to average baseline performance and ratings.

Although all students showed low levels of distress with peers, students also were not consistently interacting with peers. Brandon had highest levels of distress but also lowest peer interactions. Possible functions for low interactions may be avoidance of aversive events, rejection from peers, lack of skills, or lack of reinforcement with peers and preferred play activities to choose to interact. Although brief, the intervention consisted of multiple components that may explain decreased feelings of anxiety and an increase in positive peer interactions. Although the present study does not allow discrimination of the specific factors achieving this effect, several factors may have been influential. First, the student may have learned the skills in the psychoeducational lessons which improved their recognition of physical and emotional signs of anxiety, as well as

strategies to help regulate and decrease aversive feelings or thoughts. A student may have felt more empowered to deal with the anxious feelings they were having instead of avoiding them after they learned and practiced several strategies to stay in charge of their anxiety. Second, the exposure training sessions at recess appeared to be effective as participants were able to strategize how to accomplish an anxiety-provoking task with the support of the primary researcher. Gradually experiencing more stressful activities with success may have reduced the hesitancy to avoid social situations, increased skill fluency, and allowed participants to increase their positive interactions with their peers. It should be noted that positive praise and recognition by the researcher may have provided immediate positive reinforcement to motivate students to participate in anticipated unpleasant peer interactions. Participants continued to have positive social experiences with peers even after the researcher stopped providing immediate feedback. Interestingly students habituated quickly to peer interactions with low distress ratings. Several procedural strategies may functionally serve to continue interactions. First, training in the natural environment may have potentially increased student ability to recognize when and how to use skills. Second, natural consequences in the recess context such as fun play, peer responses, or new friendships may have positively reinforced and maintained interactions during recess. Connecting with preferred positive reinforcement right away may explain why students habituated quickly to peer interactions with low distress ratings in follow-up. Finally, students may have self-reinforced interactions with self-praise, positive thinking, and being proud of successful efforts and peer interactions.

Brennan's lower scores may indicate a need for additional skill practice for skill

proficiency or time to connect with positive reinforcements. No intervention component addressed peer rejection or peer bullying. Peer rejection could be a problem if peers refuse to play for reasons such as past aggression or poor reciprocal reinforcing behaviors from the anxious student during interactions. Thus, future studies may incorporate peer mentors for those who need additional generalization support strategies to give practice opportunities and peer exposure to a student's new skills.

The MASC results showed all four students showed a decrease in their overall self-rated anxiety, as well as their self-rated social anxiety as well. The SUDS ratings did not show a significant change from pre to post test and showed varied results. These findings could be because students may have had difficulty fully understanding the expectation of the SUDS ratings or were avoiding peer interactions that caused distress during baseline. Another possible explanation could be that teaching students how to recognize signs of anxiety during the psycho-educational sessions enhanced more accurate SUDS levels that were obtained during training, and ratings thus underestimated baseline levels.

Practical Implications

This study extended the current literature by combining a brief package of Cognitive Behavioral Therapy strategies typically implemented in a school setting by a school psychologist: direct skills training, student observation, and feedback. Several advantages were noted after implementing the program. Recess observations helped identify students struggling with peer interactions possibly due to internal psychological symptoms or disorders that are currently under-identified. Using a brief problem solving

direct service approach, the distress behaviors related to anxiety in social situations were identified, the skills and strategies to deal with that anxiety were identified and taught, followed by exposure opportunities to practice those skills in feared context with structured support. This process was made efficient by utilizing group student training similar to CBT approaches, followed by more individualized exposure practice. Students were provided with a “coping map” that prompted them to recognize strategies they had been taught previously and encourage them to use these strategies during the exposure exercise. The teacher could easily use this map to prompt and support skills in the classroom. Training in the school context also helped students connect with peers within four recess sessions.

Although Multi-tiered System of Supports (MTSS) is becoming a more widely used means to support students’ academic needs, many schools and organizations are still unclear as to how to provide services to directly impact student behavior, specifically regarding difficulties with social performance. The unclear guidelines of what exactly a Tier 2, or Tier 3 intervention might look like for behavior, may be adding to the confusion, considering the factors like the number of sessions, duration of sessions, group size, and staff providing services (Harlacher, Walker, & Stanford, 2010). The findings in this study showed positive change with a few direct training sessions conducted in small groups with the school psychologist. This suggests that teachers identifying students who may benefit from small group direct behavior skills training may be an efficient first attempt as a Tier 2 intervention. Additionally, positive outcomes were observed with a brief individualized exposure task to practice skills learned in the small group. This

addition to small group direct instruction could be considered an effective Tier 3 intervention to help support students who struggle generalizing skills taught in the small group.

Although the collaboration between the teachers and school psychologist were limited during this study, the external validity of results would be enhanced if teachers or playground supervisors could be taught how to play a valuable role in helping provide the exposure based training after a direct skills group was taught by the school psychologists. Although direct training is commonly implemented by mental health providers, few implement exposure in-vivo sessions (Kendall et. al., 2005). School Psychologist's time is limited, therefore allowing their services to focus solely on group teaching of direct social skills and strategies to deal with anxious related behaviors would allow more students to be supported. Consultation between the teacher and school psychologist to share strategies to support students after the group instruction could allow teachers to do the follow-up work regarding the exposure sessions during classroom time, recess, or other time spent with the student. Having teachers support presents a safe space in student's everyday environment where they can continue to learn how to confront distress and continue in learning activities. Continued consultation with the School Psychologist to follow-up with support if needed is recommended for future research to increase communication, feedback of interventions, and ensure that students were receiving the appropriate level of support in regards to their behavioral needs.

Limitations and Future Research

Though the present study contributes to the field of research regarding the impact of anxiety reduction in self-identified social anxiety provoking situations, several limitations of this study suggest areas for further research. First, the AB single subject design in this study does not permit the systematic assessment of the treatment condition and thus, is limited in terms of ruling out alternative interpretations. Second, the generalization of the results to other students who experience social struggles due to anxiety is limited given the small sample of students and the homogeneous nature of the sample. All students were White, native English speakers, and attending the same elementary school. Moreover, limited data collections during a specified anxiety-provoking social situation made it difficult to determine if the skills being taught and reinforced were generalized throughout the rest of the school day, or if they were being generalized in the home-setting at all. The progress monitoring data did not show whether or not students were using the skills learned without assistance from the school psychologist before recess, or if these skills transferred to the classroom. More research is required to examine the effectiveness of reducing anxiety in social situations over time and across different settings with students in other grades with diverse experiences.

The third limitation was the lack of understanding of which components of the intervention were primarily responsible for the positive outcomes observed. Given the intervention was implemented in the school setting, where time and resources are limited, further analysis of the separate effects of each intervention component and the inclusion of teacher collaboration and education is needed. Teachers may provide a first line of

defense to identify and support avoidance and anxious behaviors. It is important to intervene when these behaviors first emerge, if left unchecked, students behaviors and teachers responses become more consistent, more intensive, and are often connected to additional avoidance behavior. However, the current study did not track how many students might have responded to teacher support before the small group that was completed. Thus, future research is warranted to examine the percent of students that would respond to this first line of defense, as opposed to those who would further benefit from more extensive or individualized services. Also, the results of this component analysis may provide steps for optimal outcomes and make it more clear how behavioral interventions can fit into the MTSS model and support students most effectively.

A fourth limitation was that many of the measurements used to monitor progress were subjective measures and were used during a short period throughout the day. The lack of inter-rater reliability assessment may have impacted the accuracy of peer interaction definitions and/or the recording process. Also, no observations were recorded during other social situations such as classroom group time, assemblies, walking through the hallway, or in other settings like at the students' home. Additionally, the students self-monitoring their perceived feelings of anxiety as collected by SUDS ratings is subjective and could be affected by personal factors, such as lack of understanding, perceived answer the school psychologist wanted, or eagerness to leave the session to go back to class. In further research, it may be beneficial to include additional data such as observations in the classroom or other school functions, as well as more interactions with student's parents to gather more objective data that may or may not support subjective

ratings.

In sum, with consideration of the limitations, the results of this study show promise for school-based mental health support for students experiencing anxiety regarding social interactions. This intervention, conducted in the school setting, showed promising outcomes that a modified anxiety treatment with exposure opportunities can be effective in reducing anxiety and increasing positive peer contacts. Future work using a randomized clinical trial and a multimethod assessment is warranted.

REFERENCES

- Adelman, H. S., & Taylorb, L. (1990). Mental health in schools and system restructuring. *Clinical Psychology Review, 19*(2), 137-163.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: Author.
- Anglin, T. M. (2003). Mental health in schools: Programs of the federal government. In M. D. Weist, S. W. Evans, & N. A. Lever (Eds.). *Handbook of school mental health advancing practice and research* (pp. 89-106). Boston, MA: Springer.
- Angold, A., Costello, E., & Erkanli, A. (1999). Comorbidity. *Journal of Child Psychological Psychiatry, 40*, 57-87.
- Barrett, P. (1998). Evaluation of cognitive-behavioral group treatments for childhood anxiety disorders. *Journal of Clinical Child Psychology, 27*, 459-468.
- Barrett, P., Dadds, M., & Rapee, R. (1996). Family treatment of childhood anxiety: A controlled trial. *Journal of Consulting & Clinical Psychology, 64*, 333-342.
- Beidel, D. C., Turner, S. M., & Morris, T. L. (1999). Psychopathology of childhood social phobia. *Journal of the American Academy of Child & Adolescent Psychiatry, 38*, 643-650.
- Benjamin, C. L., O'Neill, K. A., Crawly, S. A., Beidas, R. S., Coles, M., & Kendall, P. C. (2010). Patterns and predictors of subjective units of distress in anxious youth. *Behavioral Cognitive Psychotherapy, 38*(4), 497-504.
- Bergan, J. R., & Kratochwill, T. R. (1990). *Applied clinical psychology: Behavioral consultation and therapy*. New York, NY: Plenum.
- Bittner, A., Egger, H. L., Erkanli, A., Costello, E. J., Foley, D. L., & Angold, A. (2007). What do childhood anxiety disorders predict? *Journal of Child Psychology & Psychiatry, 48*, 1174-1183.
- Boyd, C. P., Kostanski, M., Gullone, E., Ollendick, T. H., & Shek, D. T. L. (2000). Prevalence of anxiety and depression in Australian adolescents: Comparisons with worldwide data. *The Journal of Genetic Psychology, 161*, 479-492.
- Burns, B. J., & Hoagwood, K. (2002). *Community-based treatment for youth: Evidence-based interventions for severe emotional and behavioral disorders*. New York, NY: Oxford University Press.

- Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.
- Cartwright-Hatton, S., Tschernitz, N., & Gomersall, H. (2005). Social anxiety in children: Social skills deficits, or cognitive distortion? *Behavior Research and Therapy*, *43*(1), 131-141.
- Chambless, D. L., & Hollon, S. D. (1998). Defining empirically supported therapies. *Journal of Consulting & Clinical Psychology*, *66*, 7-18.
- Chavira, D. A., Stein, M. B., Bailey, K., & Stein, M. T. (2004). Child anxiety in primary care: Prevalent but untreated. *Depression & Anxiety*, *20*, 155-164.
- Chu, B. C., & Kendall, P. C. (2004). Positive association of child involvement and treatment outcome within a manual-based cognitive-behavioral treatment of children with anxiety. *Journal of Consulting and Clinical Psychology*, *72*(5), 821-829.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Collins, K. A., Westra, H. A., Dozois, D. J., & Burns, D. D. (2004). Gaps in accessing treatment for anxiety and depression: Challenges for the delivery of care. *Clinical Psychology Review*, *24*(5), 583-515.
- Colognori, D., Esseling, P., Stewart., C., Reis, P., Lu, F., & Warner, C. M. (2012). Self-disclosure and mental health service use in socially anxious adolescents. *School Mental Health*, *4*(4), 219-230.
- Compton, S. N., Burns, B. J., Egger, H. L., & Robertson, E. (2002). Review of the evidence base for treatment of childhood psychopathology: Internalizing disorders. *Journal of Consulting & Clinical Psychology*, *70*, 1240-1266.
- Connolly, S. D., & Berstein, G.A. (2007). Practice parameters for the assessment and treatment of children and adolescents with anxiety disorders. *Journal of the American Academy of Child & Adolescent Psychiatry*, *46*(2), 267-283.
- Costello, E. J., Mustillo, S., Erkanli, A., Keeler, G., & Angold, A. (2003). Prevalence and development of psychiatric disorders in childhood and adolescence. *Archives of General Psychiatry*, *60*(8), 837-844.
- Costello, E. J., Egger, H. L., & Angold, A. (2005). The development epidemiology of anxiety disorders: Phenomenology, prevalence, and comorbidity. *Child & Adolescent Psychiatric Clinics of North America*, *14*, 631-648.

- Crawley, S., Beidas, R.S., Benjamin, C., Martin, E., & Kendall P.C. (2008). Treating socially phobic youth with CBT: Differential outcomes and treatment considerations. *Behavioural & Cognitive Psychotherapy*, *36*, 379-389.
- Donovan, C. L., & Spence, S. H. (2000). Prevention of childhood anxiety disorders. *Clinical Psychology Review*, *20*, 509-531.
- Essau, C. A. (2005). Frequency and patterns of mental health services utilization among adolescents with anxiety and depressive disorders. *Depression and Anxiety*, *22*, 130-137.
- Essau, C. A., Conradt, J., & Petermann, F. (1999) Frequency and comorbidity of social phobia and social fears in adolescents. *Behaviour Research & Therapy*, *37*, 831-843.
- Evans, S. W., Koch, R., Brady, C., Meszaros, P., & Sadler, J. (2012). Community and school mental health professionals' knowledge and use of evidence based substance use prevention programs. *Administration & Policy in Mental Health & Mental Health Services Research*, *40*(4), 319-330.
- Farmer, E. M., Burns, B. J., Phillips, S. D., Angold, A., & Costello, E. (2003). Pathways into and through mental health services for children and adolescents. *Psychiatric Services*, *54*, 60-66.
- Flanner-Schroeder, E. C., & Kendall, P. C. (2000). Group and individual cognitive-behavioral treatments for youth with anxiety disorders: A randomized clinical trial. *Cognitive Therapy & Research*, *24*, 251-278.
- Ford, T., Goodman, R., & Meltzer, H. (2003). The British Child and Adolescent Mental Health Survey 1999: The prevalence of DSM-IV disorders. *Journal of the American Academy of Child & Adolescent Psychiatry*, *42*, 1203-1211.
- Ginsburg, G. S., Becker, K. D., Kingery, J. N., & Nichols, T. (2008). Transporting CBT for childhood anxiety disorders into inner-city school-based mental health clinics. *Cognitive & Behavioral Practice*, *15*, 148-158.
- Ginsburg, G. S., & Drake, K. L. (2002). School-based treatment for anxious African-American adolescents: A controlled pilot study. *Journal of the American Academy of Child & Adolescent Psychiatry*, *41*, 768-775.
- Gresham, F. M., Elliot, S. N., Vance, M. J., & Cook, C. R. (2011). Comparability of the social skills rating system to the social skills improvement system: Content and psychometric comparisons across elementary and secondary age levels. *School Psychology Quarterly*, *26*(1), 27-44.

- Grills, A., & Ollendick, T. H. (2002). Peer victimization, global self-worth, and anxiety in middle-school children. *Journal of Clinical Child & Adolescent Psychology, 31*, 59-68.
- Harlacher, J. E., Walker, N. J., & Sanford, A. K. (2010). The “I” in RTI: Research-based factors for intensifying instruction. *Teacher Exceptional Children 42*(6), 30-38.
- Harrop, A., & Daniels, M. (1986). Methods of time sampling: a reappraisal of momentary time sampling and partial interval recording. *Journal of Applied Behavior Analysis, 19*(1), 73-77.
- Hazler, R. J., & Denham, S. A. (2002). Social isolation of youth at risk: Conceptualizations and practical implications. *Journal of Counseling & Development, 80*(4), 403-409.
- Ialongo, N., Edelsohn, G., Werthamer-Larsson, L., Crockett, L., & Kellam, S. (1995). The significance of self-reported anxious symptoms in first grade children: Prediction to anxious symptoms and adaptive functioning in fifth grade. *Journal of Child Psychology & Psychiatry, 36*, 427-437.
- Kaplan, D. M., Smith, T., & Coons, J. (1995). A validity study of subjective units of discomfort (SUD) score. *Measurement and Evaluation in Counseling and Development, 27*(4), 195-199.
- Kashdan, T. B., & Herbert, J. D. (2001). Social anxiety disorder in childhood and adolescence: current status and future directions. *Clinical Child and Family Psychology Review, 4*(1), 37-61.
- Kelly, M. S., Berzin, S. C., Frey, A., Alvarez, M., Shaffer, G., & O'Brien, K. (2010). The state of school social work: Findings from the national school social work survey. *School Mental Health, 2*, 132-141.
- Kendall, P. C. (1994). Treating anxiety disorders in children: Results of a randomized clinical trial. *Journal of Consulting Psychology, 62*(1), 100-110.
- Kendall, P. C., Comer, J., Marker, C., Creed, T., Puliafico, A., Hughes, A., ... Hudson, J. (2009). In-session exposure tasks and therapeutic alliance across the treatment of childhood anxiety disorders. *Journal of Consulting & Clinical Psychology, 77*, 517-525.
- Kendall, P. C., Compton, S., Walkup, J., Birmaher, B., Albano, A. M., Sherrill, J., ... Piacentini, J. (2010). Clinical characteristics of anxiety disordered youth. *Journal of Anxiety Disorders, 24*, 360-365.

- Kendall, P. C., Flannery-Schroeder, E., Panichelli-Mindel, S. M., Southam-Gerow, M., Henin, A., & Warman, M. (1997). Therapy for youths with anxiety disorders: A second randomized clinical trial. *Journal of Consulting & Clinical Psychology, 65*, 366-380.
- Kendall, P. C., & Hedtke, K. A. (2006). *Coping cat workbook* (2nd ed.). Ardmore, PA: Workbook Publishing.
- Kendall, P. C., Hudson, J. L., Gosch, E., Flannery-Schroeder, E., & Suveg, C. (2008). Cognitive-behavioral therapy for anxiety disorder youth: A randomized clinical trial evaluating child and family modalities. *Journal of Consulting & Clinical Psychology, 76*, 282-297.
- Kendall, P. C., Robin, J. A., Hedtke, K. A., Suveg, C., Flannery-Schroeder, E., & Gosch, E. (2005). *Cognitive & Behavioral Practice, 12*(1), 136-150
- Kendall, P. C., Settapani, C. A., & Cummings, C. M. (2012). No need to worry: The promising future of child anxiety research. *Journal of Clinical Child & Adolescent Psychology, 43*(1), 103-115.
- Kendall, P. C., Safford, S., Flannery-Schroeder, E., & Webb, A. (2004). Child anxiety treatment: Outcomes in adolescence and impact on substance abuse and depression at 7.4-year follow-up. *Journal of Consulting & Clinical Psychology, 72*, 276-287.
- Kessler, R. C., Cox, B. J., Green, J. G., Ormel, J., McLaughlin, K. A., Merikangas, K. R., Zaslavsky, A. M. (2011). The effects of latent variables in the development of comorbidity among common mental disorders. *Depression & Anxiety, 28*, 29-39.
- King, N. J., Tonge, B. J., Heyne, D., Pritchard, M., Rollings, S., Young, D., ... Ollendick, T. H. (1998). Cognitive-behavioral treatment of school-refusing children: A controlled evaluation. *Journal of the American Academy of Child & Adolescent Psychiatry, 37*, 395-403.
- Labellarte, M. J., Ginsburg, G. S., Walkup, J. T., & Riddle, M. A. (1999). The treatment of anxiety disorders in children and adolescents. *A Journal of Psychiatric Neuroscience & Therapeutics, 46*(11), 1567-1578.
- Langley, A. K., Bergman, R. L., McCracken, J., & Piacentini, J. C. (2004). Impairment in childhood anxiety disorders: Preliminary examination of the child anxiety impact scale-parent version. *Journal of Child & Adolescent Psychopharmacology, 14*(1), 105-114.
- Lopez, B., Turner, R., & Saavedra, L. (2005). Anxiety and risk for substance dependence among late adolescents/young adults. *Journal of Anxiety Disorders, 19*, 275-294.

- Lowry-Webster, H., Barrett, P. M., & Dadds, M. R. (2001). A universal prevention trial of anxiety and depressive symptomatology in childhood: Preliminary data from an Australian study. *Behaviour Change, 18*, 36-50.
- Masia, C. L., Klein, R. G., Storch, E. A., & Corda, B. (2001). School-based behavioral treatment for social anxiety disorder in adolescents: Results of a pilot study. *Journal of the American Academy of Child & Adolescent Psychiatry, 40*, 780-786.
- McGinnis, E., Sprafkin, R.P., & Goldstein, A.P.(2012). *Skillstreaming the Adolescent: A Guide to Teaching Prosocial Skills, 3rd Edition*. Research Press, Champaign, Ill.
- Merkanga, K. R., He, J., Burstein, M., Swendsen, J., Avenevoli, S., Case, B., ... Olfson, M. (2011). Service utilization for lifetime mental disorders in the U.S. adolescents: Results from the National Comorbidity Survey-Adolescent Supplement (NCS-A). *Journal of the American Academy of Child & Adolescent Psychiatry, 50*, 32-45.
- McLoone, J., Hudson, J. L., & Rapee, R. M. (2006). Treating anxiety disorders in a school setting. *Education and Treatment of Children, 29*(2), 219-242.
- Mychailyszyn, M. P., Brodman, D. M., Read, K. L., & Kendall, P. C. (2012). Cognitive-behavioral school-based interventions for anxious and depressed youth: A meta-analysis of outcomes. *Clinical Psychology Science & Practice, 19*(1), 129-153.
- Mychailyszyn, M. P., Mendez, J. L., & Kendall, P. C. (2010). School functioning in youth with and without anxiety disorders: Comparisons by diagnosis and comorbidity. *School Psychology Review, 39*(1), 106-121.
- Mychailyszyn, M. P., Beidas, R. S., Benjamin, C. L., Edmunds, J. M., Podell, J. L., Cohen, J. S., ... Kendall, P. C. (2011). Assessing and treating child anxiety in schools. *Psychology in the Schools, 48*(3), 223-232.
- Nauta, M., Scholing, A., Emmelkamp, P., & Minderaa, R. (2003). Cognitive-behavioral therapy for children with anxiety disorders in a clinical setting: No additional effect of a cognitive parent training. *Journal of the American Academy of Child & Adolescent Psychiatry, 42*, 1270-1278.
- Rapee, R. M., Kennedy, S., Ingram, M., Edwards, S., & Sweeney, L. (2005). Prevention and early intervention of anxiety disorders in inhibited preschool children. *Journal of Consulting & Clinical Psychology, 73*, 488-497.
- Reivich, K., Gillham, J. E., Chaplin, T. M., & Seligman, M. E. P. (2005). From helplessness to optimism: The role of resilience in treating and preventing depression in youth. In S. Goldstein & R. B. Brooks (Eds.), *Handbook of resilience in children* (pp. 223-237). New York, NY: Kluwer Academic/Plenum.

- Rones, M., & Hoagwood, K. (2000). School-based mental health services: A research in review. *Clinical Child & Family Psychology Review*, 3, 223-241.
- Rubin, K. H., Coplan, R. J., & Bowker, J. C. (2009). Social withdrawal in childhood. *Annual Review of Psychology*, 60, 141-171.
- Rudd, M. D., Joiner, J. T., & Rumzek, H. (2004). Childhood diagnoses and later risk for multiple suicide attempts. *The Official Journal of the American Association of Suicidology*, 34(2), 113-125.
- Ruscio, A. M., Brown, T. A., Chiu, W. T., Sareen, J., Stein, M. B., & Kessler, R. C. (2008). Social fears and social phobia in the USA: Results from the National Comorbidity Survey replication. *Psychological Medicine*, 38, 15-28.
- Ryan, J. L., & Warner, C.M. (2012). Treating adolescents with social anxiety disorders in schools. *Child & Adolescent Psychiatric Clinics of North America*, 21, 105-118.
- Safford, S.M., Kendall, P.C., Flannery-Schroeder, E., Webb, A., Sommer, H. (2005). A longitudinal look at parent-child diagnostic agreement in youth treated for anxiety disorders. *Journal of Clinical Child & Adolescent Psychology*, 34(4).
- Schoenwald, S. K., & Hoagwood, K. (2001). Effectiveness, transportability, and dissemination of interventions: What matters when? *Psychiatric Services*, 52, 1190-1197.
- Scruggs, T. E., Mastropieri, M. A., & Casto, G. (1987). The quantitative synthesis of single-subject research. *Remedial and Special Education*, 8(2), 24-33.
- Shortt, A., Barrett, P., & Fox, T. (2001). Evaluating the FRIENDS program: A cognitive behavioral group treatment for anxious children and their parents. *Journal of Clinical Child Psychology*, 30, 525-535.
- Silverman, W. K., Kurtines, W. M., Ginsburg, G. S., Weems, C. G., Lumpkin, P. W., & Carmicheal, D. H. (1999). Treating anxiety disorders in children with group cognitive behavioral therapy: A randomized clinical trial. *Journal of Consulting & Clinical Psychology*, 25, 225-237.
- Silverman, W. K., Pina, A. A., & Viswesvaran, C. (2008). Evidence-based psychosocial treatments for phobic and anxiety disorders in children and adolescents. *Journal of Clinical Child & Adolescent Psychology*, 37(1), 105-130.
- Spence, S. H., Holmes, J. M., March, S., & Lipp, O. V. (2006). The feasibility and outcome of clinic plus internet delivery of cognitive-behavior therapy for childhood anxiety. *Journal of Consulting & Clinical Psychology*, 74, 614-621.

- Storch, E. A., & Crisp, H. L. (2004). Taking it to the schools: Transporting empirically supported treatments for childhood psychopathology to the school setting. *Clinical Child & Family Psychology Review*, 7(4), 191-193.
- Storch, E. A., & Warner, C. M. (2004). The relationship of peer victimization to social anxiety and loneliness in adolescent females. *Journal of Adolescence*, 27(3) 351-362.
- Storch, E. A., Geffken, G. R., Merlo, L. J., Mann, G., Duke, D., Munson, M., ... Goodman, W. K. (2007). Family-based cognitive-behavioral therapy for pediatric obsessive-compulsive disorder: Comparison of intensive and weekly approaches. *Journal of the American Academy of Child & Adolescent Psychiatry*, 46, 469-478.
- Thyer, B.A., Papsdorf, J.D., Davis, R., & Vallecorsa, S. (1984). Autonomic correlates of the subjective anxiety scale. *Journal of Behavior Therapy and Experimental Psychiatry*, 15(1), 3-7.
- Turco, T.L & Elliot, S.N. (1986). Students acceptability ratings of interventions for classroom misbehaviors: A study of well-behaving and misbehaving youth. *Journal of Psychoeducational Assessment*, 4(4), 281-289.
- Verduin, T. L., & Kendall, P. C. (2008). Peer perceptions and liking of children with anxiety disorders. *Journal of Abnormal Child Psychology*, 36, 459 - 469.
- Wagner, A. P. (2002). *Worried no more: Help and hope for anxious children*. Rochester, NY: Lighthouse Press.
- Walker, H. M., & Severson, H. H. (1992). *Systemic screening for behavior disorders*. Longmont, CO: Sopris West.
- Walkup, J. T., Albano, A. M., Piacentini, J., Birmaher, B., Compton, S. N., Sherrill, J. T., ... Kendall, P. C. (2008). Cognitive behavioral therapy, sertraline, or a combination in childhood anxiety. *New England Journal of Medicine*, 359, 2753-2766.
- Warner, C.M., Klein, R. G., Dent, H. C., Fisher, P. H., Alvir, J., Albano, A., & Guardino, M. (2005). School-based intervention for adolescents with social anxiety disorder: Results of a controlled study. *Journal of Abnormal Child Psychology*, 33(6), 707-722.
- Warner, C.M., Fisher, P. H., Shrout, P. E., Rathor, S., & Klein, R. G. (2007). Treating adolescents with social anxiety disorder in school: An attention control trial. *Journal of Child Psychology & Psychiatry*, 48(7), 676-686.
- Weist, M. D. (1999). Challenges and opportunities in expanded school mental health. *Clinical Psychology Review*, 19, 131-135.

- Wittchen, H. U., Stein, M. B., & Kessler, R. C. (1999). Social fears and social phobia in a community sample of adolescents and young adults: Prevalence, risk factors, and comorbidity. *Psychological Medicine, 29*, 309-323.
- Woodward, L. J., & Fergusson, D. M. (2001). Life course outcomes of young people with anxiety disorders in adolescence. *Journal of the American Academy of Child & Adolescent Psychiatry, 40*, 1086-1093.

APPENDICES

Appendix A
Child Demographic Form

Child Demographic Form

Child Information

- 1) Child's age: _____ Birth date (month/date/year): _____
- 2) Child's grade level: _____
- 3) Child's gender: male female
- 4) Child's race/ethnicity (Check all that apply):
- Asian
 - Pacific Islander
 - African American
 - Caucasian
 - Hispanic/Latino
 - Native American
 - Other _____
- 4) Has your child ever been diagnosed with any psychological and/or behavioral disorders?
- No Yes (Please specify which ones:
_____)
- 5) Is your child currently taking any medication? yes no
- 6) Is your child receiving counseling, therapy, or behavioral services? yes no
- 7) Annual Household Income
- Less than \$15,000
 - \$15,000 – 30,000
 - \$30,000 – 45,000
 - \$45,000 – 60,000
 - \$60,000 – 75,000
 - \$75,000 – 90,000
 - More than \$90,000

Appendix B

Teacher Problem Identification Interview - Modified

Teacher Problem Identification Interview – Modified

Student: _____ Grade: _____ Date: _____

Thank you for taking the time to meet with me. My goal is for me to start getting a better understanding about what may help the child. Today I would like to ask you some questions about your concerns about the child.

First, what are the specific social problems with his/her worrying or distress that concerns you? What does the child do when he or she is anxious? What does the child **NOT** do when he or she is anxious?

About how many times a day? Or week does this occur?

We would like to work with this student starting with least to most worrisome, distressful social situations/ circumstances using this thermometer. What would you add to this list? Here are some example social situations. (show Feeling Ladder/ hierarchy worksheet)

Relative to other student in your class, is this student doing fine (yes) or (no)?

- _____ Confidence and positive statements/beliefs about self
- _____ Social skills
- _____ Problem solving skills
- _____ Emotional regulation
- _____ Coping skills
- _____ Social support

Summarize statement.

“You are most concerned with . . . and this problem occurs about . . . times per day. Is that right?”

Now I will be asking some questions to get an idea about what it would look like when I observe this problem. As I ask questions, please give me specific examples.

What happens before worrying behaviors occurs? Are you aware of anything that appears to cause the student to worry? What things seem to set him or her off?

What happens when the student exhibits problem behavior? What do you or other adults typically do?

What do the student’s peers typically do?

Is there anything that he/she seems to get out of or avoid when the student exhibits the behavior? (work, social activities, etc.)

Is there anything that he/she seems to avoid so that he or she does not experience worry?

Summarize ABC statement:

“You said it appears that the problem behavior often occurs when . . . and when or after the behavior occurs then several things happen . . . Does this sound correct?”

Let me ask about what behaviors are expected or some goals. What would you like to see the child do instead of the problem behavior?

Summarize Problem with Expectations: Let’s see. The main problem is . . . However, he/she needs to . . . Is that right?

What are the child’s resources or personal strengths?

Are there other factors that I need to be aware of? (e.g., health or sensory deficits)?

Appendix C

Child Involvement Rating Scale

Child Involvement Rating Scale

		Not at all present 0	1	2	3	4	A great deal present 5
1.	Does the child initiate discussion or introduce new topics?						
2.	Does the child demonstrate enthusiasm in therapy related tasks?						
3.	Does the child offer information about self (self-disclosure)?						
4.	Does the child elaborate on points made by the therapist or demonstrate understanding?						
5.	Is the child withdrawn or passive (e.g., not responding to the therapist)?						
6.	Is the child inhibited or avoidant in participation (e.g., not fully participating)?						

Appendix D
Subjective Units of Distress

Appendix E

Children's Intervention Rating Profile

Children's Intervention Rating Profile
(Witt & Martens, 1983)

We are very interested in learning your ideas about the program that you are now finishing. Below are some sentences. You may or may not agree with the sentences. For each one, please circle the number that describes how much you agree or disagree with the statement. Use the following guide:

- 5 = I agree very much
- 4 = I sort of agree
- 3 = I don't agree or disagree
- 2 = I sort of disagree
- 1 = I disagree very much

For example, mark how much you agree with this statement

		I agree very much			I disagree very much	
	I love pizza.	1	2	3	4	5

		I agree very much			I disagree very much	
1.	The program used to deal with the problem was fair.	1	2	3	4	5
2.	The program was too harsh (mean).	1	2	3	4	5
3.	Using the program to deal with the problem might cause problems with my friends.	1	2	3	4	5
4.	There are better ways to handle this problem.	1	2	3	4	5
5.	Using the program would be good for other children.	1	2	3	4	5
6.	I liked the program for handling this problem.	1	2	3	4	5
7.	Using the program for this problem would help other children do better in school.	1	2	3	4	5

Appendix F

Direct Social Interaction Observation Form

Direct Social Interaction Observation Form

Date: _____ Observer: _____ Participant code: _____

Key: P = Positive N = Negative A = Alone

	Target	Peer Tally									
1	P N A		2	P N A		3	P N A		4	P N A	
5	P N A		6	P N A		7	P N A		8	P N A	
9	P N A		10	P N A		11	P N A		12	P N A	
13	P N A		14	P N A		15	P N A		16	P N A	
17	P N A		18	P N A		19	P N A		20	P N A	
21	P N A		22	P N A		23	P N A		24	P N A	
25	P N A		26	P N A		27	P N A		28	P N A	
29	P N A		30	P N A		31	P N A		32	P N A	
33	P N A		34	P N A		35	P N A		36	P N A	
37	P N A		38	P N A		39	P N A		40	P N A	
41	P N A		42	P N A		43	P N A		44	P N A	
45	P N A		46	P N A		47	P N A		48	P N A	
49	P N A		50	P N A		51	P N A		52	P N A	
53	P N A		54	P N A		55	P N A		56	P N A	
57	P N A		58	P N A		59	P N A		60	P N A	

Number of peer contacts: _____

Positive interactions: _____ tallies/ 60 * 100 = _____%

Negative interactions: _____ tallies/ 60 * 100 = _____%

Alone interactions: _____ tallies/ 60 * 100 = _____%

Appendix G
Teacher Nomination Form

Teacher Nomination Form

A number of students regularly seen in classrooms are experiencing levels of anxiety that impinge to some degree on their functioning in school work or / and with relationships with teachers or peers. We are interested in identifying those students who are more shy, distressed and/or are more worried than other children his or her age. These children are also having a hard time managing stress and worries. Some children may be rather quiet, shy, cautious and withdrawn. Other students may act out with frustration, crying, and avoidance. Often these children just can't seem to relax and show restlessness; difficulty concentrating; irritability; fidgeting; edginess; fatigue; a need for frequent urination and stomach aches.

We are interested in identifying children who would benefit from improvement in a training program designed to teach and support children a number of different ways of thinking, behaving, and reacting to situations that help him or her feel less anxious and worried. These students would work with us for 8 to 10 weeks for about 30 minutes a week. We would also share some topics with the student teachers to help prompt and praise students for using skills taught in that program.

Names of Students (In order of most concern to least concern?)

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Appendix H
Informed Consent



Department of Psychology
2810 Old Main Hill
Logan UT 84322-2810
Telephone: (435) 797-2034



Page 78 of 95
USU IRB Approval: Oct. 20, 2014
Approval Terminates: 10/19/2015
Protocol 5797

IRB Password Protected per IRB Administrator

INFORMED CONSENT

Utilizing a School-Based Treatment to Address Socially Anxious Elementary School Students

Dear Parents,

We are writing to request permission to include your child in a study with Utah State University Psychology Department that is finding ways to support students who are anxious at school. You have been asked to take part because you are a parent of a child who may benefit from learning more ways to lower and cope with anxiety that is getting in the way of interacting comfortably with others. Professor Donna Gilbertson and graduate student / School Psychology intern McKell Nelson, both in the Department of Psychology at Utah State University, are conducting this research study with 6 students.

What will your child be doing?

If you agree to allow your child to participate, the following will happen to you and your child.

- 1) You will be asked to complete the attached sheet about your child. Please turn in the sheet with this form if you wish for your child to participate in this program.
- 2) We will meet with your child's teacher for about 15 minutes and with your child to give several questionnaires for about 20 minutes to gather information about what may help your child. Your child will be observed during recess for about 10 minutes and asked to rate his/her anxiety level on a thermometer rating that day for three to twelve recess times.
- 3) Your child will work with McKell Nelson for about 4 weeks on the following steps. Your child will be included in four 30 minute psycho-education classes with McKell Nelson that will include: ways to cope with worry, how anxiety feels, skills to challenge the anxiety, and role plays to practice these skills. Once these sessions are complete, your child will participate in four to six support sessions at recess. These sessions will start by reminding your child about the skills learned right before recess and asking your child to practice using the skills during recess. After observing your child using the skills during recess, your child will rate how useful the skill was in lowering anxiety.
- 4) At the end of the study, your child will complete assessments to report how successful the skills were in decreasing/managing his/her anxiety.

What are the risks for my child?

Participation in this research study may involve some added risks or discomforts. Because we are talking about difficult social situations your child may experience slight psychological

discomfort from completing the surveys about himself/herself and his/her behavior. Your child may skip any questions that he or she chooses not to answer. We also selected important skills that can be used in schools, but your child will need to be working with us for 2 to 3 hours over the course of the study. We will work closely with teachers to determine the best time to work with children so that no school work will be missed. Finally, there is a small risk of loss of confidentiality but we will take steps to reduce this risk as described below. If any unforeseen risks are identified, we will immediately notify you of these.

What are the benefits for my child?

This program is likely to directly benefit the child by giving him/her the opportunity to learn ways to handle anxiety and worries that are getting in the way of peer relationships at school. Additional benefits your child may experience include improved peer relations, increased coping skills, increased social support, and improved ability to manage difficult peer interactions. Following the study, results of intervention will be shared with parents, and teachers with parent consent, so that parents and teachers may learn ways to also support their child at home or in class. Finally, the information gained by this study could potentially help the researchers determine which facets of existing programs are most effective for increasing the social interactions of children who may be experiencing or are at risk of social anxiety.

What is the Voluntary Nature of Participation and Right to Withdraw without Consequence?

Participation in this research is entirely voluntary. You and your child may refuse to participate or withdraw from the study at any time without consequence.

What will take place to maintain confidentiality?

Research records will be kept confidential, consistent with federal and state regulations. To protect the privacy of you and your child, personal, identifiable information will not be included on any study documents. A number code will be used to replace your name and the name of your child on all documents. The code will be kept separate from the data throughout the study and it will be destroyed one year after the study is completed. Only the principal investigator and student researcher will have access to the coded data. To protect your confidentiality, the data will be kept in a locked file cabinet or on a password protected computer in a locked room, to maintain confidentiality. A report will be prepared at the end of this study with no individual results reported in the summary.

How may I ask questions?

If you have other questions or research-related problems, you may reach Donna Gilbertson at (435) 797- 2034 or donna.gilbertson@usu.edu. You may also contact McKell Nelson (801-754-3237 ext. 1428) or mckell.nelson@nebo.edu. The Principal of Orchard Hills Elementary, Ryan Murray (801-754-3237 ext. 1405) can also be contacted for more information.

IRB Approval Statement: The Institutional Review Board for the protection of human participants at USU has approved this research study. If you have any pertinent questions or concerns about your rights or a research-related injury, you may contact the IRB Administrator at (435) 797-0567 or email irb@usu.edu. If you have a concern or complaint about the research and you would like to contact someone other than the research team, you may contact the IRB Administrator to obtain information or to offer input.

Copy of consent: You have been given two copies of this Informed Consent. Please sign both copies and keep one copy for your files to keep contact information.

Investigator Statement: "I certify that the research study has been explained to the individual, by me or my research staff, and that the individual understands the nature and purpose, the possible risks and benefits associated with taking part in this research study. Any questions that have been raised have been answered."

Signatures of Researchers

Donna M. Gilbertson, Ph.D.
Principal Investigator
(435) 797-2034

McKell Nelson (Miner) M.S.
Graduate Researcher
(801) 754-3237 ext. 1428

Signature of Parent / Guardian: Please initial one below and sign if agreeing to allow your child to participate

_____ NO, I do NOT want to participate in this study and I do not want my child to participate

_____ YES, I am willing to have my child participate in this study.

Signature of Parent/Guardian _____ Date _____

Printed Name of Parent / Guardian _____

Printed Name of Child _____

Child/Youth Assent: I understand that my parent(s)/guardian is/are aware of this research study and that permission has been given for me to participate. I understand that it is up to me to participate even if my parents say yes. If I do not want to be in this study, I do not have to and no one will be upset if I don't want to participate or if I change my mind later and want to stop. I can ask any questions that I have about this study now or later. By signing below, I agree to participate.

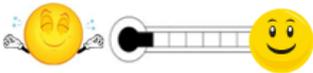
Name

Date

Appendix I

Feelings Thermometer Hierarchy List Form

Feelings Thermometer Hierarchy List Form

1- Relaxed/Happy			No Problem!
2- Fidgety/Bothered			I'm feeling bugged- but I'm in control
3- Unsure/Annoyed			
4- Apprehensive/ Distressed			I'm feeling overwhelmed
5- Nervous/Upset			
6- Afraid/Angry			I need help!
7- Terrified/Irate			
8- Hysterical/Enraged			YIKES! Get me out of here!

- Example situations:
- Seeking help from peers
 - Asking to play
 - Playing with one peer
 - Working with one peer
 - Expressing feelings to peers
 - Looking peers in the eye
 - Answering a question from a peers
 - Maintaining a conversation with one peer
 - Participating in a conversation with more than one peer
 - Greeting peers
 - Inviting someone to play
 - Playing at recess with one peer (two, etc.)
 - Complimenting
 - Receiving criticism
 - Suggesting an activity
 - Responding to teasing
 - Accepting "no"
 - How to deal with a disagreement

Appendix J
Coping Skills Map

Coping Skills Map

Skill	Hierarchy level	What <i>could</i> I use?	SUDS level	What <i>did</i> I use?	Was goal met?
		Idle-deep breaths! Relax!			
		Check up! It is Anxiety talking, not me!			
		Rev it up! I am in charge "I CAN DO" thinking!			
		Talk about feelings to others			
		Keep on trucking! Try your best!			
		Be proud of trying!			
		Reward yourself!			
		Realistic thinking			
		Problem solve, make a plan			
		Replace negative thoughts with positive ones!			

Appendix K
Student Interview Form

Student Interview Form

Everyone has easy times at school and have things that they really like about school. And everyone has some times when things are harder for them or times when they have problems and worries. Children often feel like there are jumping jelly beans in their belly during problem or worry times. They don't really have jumping beans in the belly but it feels like that sometimes. Some children feel nervous or jittery. What are some things that kids worry about or get that jumping jelly bean feeling at school?

But everyone would say that different things are easy and different things are hard. I would like to ask you some questions to find out the easiest and hardest time for you.

When do you think that you have the fewest problems in school? When is it easiest for you? (When, Where, who?)

What are your favorite activities at school? Who are your favorite friends?

Now let's talk about the harder times at school. Here are three jumping bean feeling that you might feel least to most intense jumpy feelings that everyone gets in their belly at times. Let's write down some things that are the hardest, most distressful or worry times for you in school. I am going to read off some situations. Tell me what thermometer box you would place it? (use worksheet –read situation, write numbers in box)

Are there others we did not list? Are there other situations that you most want to make better?

Why do you think you do have problems or worry times? (Just check –go on if no answer).

What changes could be made so you would have fewer problems with _____