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Evaluating a Social and Emotional Learning Curriculum, Strong Kids, Implemented School-Wide

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Evaluating a Social and Emotional Learning Curriculum, *Strong Kids,* Implemented School-Wide

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ABSTRACT

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The goal of this study was to explore whether *Strong Kids* could result in improved social and emotional competence when implemented as a school-wide universal intervention. No prior studies have examined this question. This study also evaluated whether teachers could implement *Strong Kids* as it was designed and whether they viewed it as socially valid. It used a non-equivalent control group design. The treatment school in the study involved 348 students and 17 teachers from a Title I school. School demographics indicated that 61% of students were Hispanic, 37% White, and 2% of other ethnicities. Approximately 82% of the students qualified for free or reduced lunch. Teachers at the treatment school taught *Strong Kids* for 12 weeks, permitted treatment fidelity observations, and completed a social validity questionnaire (with a subgroup also participating in a social validity focus group). The control school participants consisted of 266 students and 11 teachers. The control school was selected because it was demographically similar to the treatment school. Teachers at both treatment and control schools completed pretest and posttest ratings of each of their students' internalizing behaviors and peer-related prosocial behaviors using nationally normed scales. Analyses comparing teacher ratings of the treatment school with ratings at the control school were performed using a split-plot ANOVA. Scores for students identified as at-risk through school-wide screening were compared to students not identified as at-risk. Average scores on the social validity questionnaire were calculated, and a qualitative analysis of the focus group was performed. Results revealed that 82% of lesson components were fully implemented. Teacher ratings at the treatment school reflected a significant decrease in students' internalizing behaviors, while ratings at the control school increased. At-risk students showed significantly greater improvements on both internalizing and peer-relations subscales compared to non-at-risk students. Social validity results revealed that *Strong Kids* provided a common language for teachers and students to talk about feelings and an avenue for students to seek help. It also helped teachers set school-wide expectations for handling social and emotional concerns.

Keywords: social and emotional learning curriculum, SEL, internalizing symptoms, *Strong Kids,* universal intervention, school-wide

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Introduction

Many elementary students face challenges that go beyond academics. In addition to the typical academic demands of school, many students must also deal with adverse living circumstances such as poverty, family discord, maltreatment or neglect, or parental psychopathology. These are among the risk factors associated with negative outcomes such as lower academic proficiency, delinquency, weak attachment to school, unemployment, incarceration, high-risk behaviors, family dysfunction, mental illness, and suicide (Asher & Coie, 1990; Doll & Lyon, 1998). Although some students display resilience in spite of the challenges they face, many students are not equipped with the necessary coping skills to overcome these challenges.

Over the last few decades researchers and educators have become more concerned with the mental health needs of children. Some estimate that perhaps as many as 20% of children have a diagnosable psychiatric condition, with half of those meeting criteria for a severe emotional disturbance (Hoagwood & Johnson, 2003). However, only 20% of students with a diagnosable psychiatric condition go on to receive adequate treatment. Of those who do receive treatment, 70–80% are treated in schools (Hoagwood & Johnson, 2003), possibly due to the high cost of health care or limited access to or knowledge of mental health resources. Pressure is placed on schools to handle much more than just academic concerns. School personnel are now asked to address the many emotional and behavioral problems of students. Schools have become the primary mental health delivery system for children.

These problems demand attention from educators and mental health professionals. Many educators, parents, and policy makers are advocating that additional instruction and training in social and emotional competence be provided as a means to ameliorate these issues (Metlife,

2002). Research-based social and emotional learning (SEL) programs have been developed as prevention and intervention strategies and have been shown to be effective (Elias, Arnold, & Hussey, 2003; Greenberg, Domitrovich, &Bumbarger, 2001). Despite this, schools have been slow to adopt and sustain such programs or to implement them effectively (Domitrovich & Greenberg, 2000; Walker & Gresham, 2003; Walker, 2004). As a result, successful outcomes are limited, and changes not very long-lasting (Gresham, Sugai, & Horner, 2001). Another challenge facing educators is that often students' emotional and behavioral problems become evident and problematic only after the optimal period for treatment has passed. One program, *Strong Kids* (Merrell, Carrizales, Feuerborn, Gueldner, & Tran, 2007), has shown promise in bridging the gap between research and effective implementation.

The goal of this study was to explore whether the *Strong Kids* program could replicate the previously demonstrated significant increases in social and emotional competence when implemented as a universal, school-wide intervention. Several studies have demonstrated the effectiveness of *Strong Kids,* but to this point, no studies have examined the effects of *Strong Kids* when implemented school-wide as a universal intervention.

Some researchers have noted that in the past, character behavior programs have often been fragmented and isolated (Zins, Bloodworth, Weissberg, & Walberg, 2004). As a result, these disjointed programs have often led to uneven success (Stoiber, 2011). Programs that are comprehensive, integrative, and coordinated and span multiple years are more likely to be successful (Payton et al., 2008; Stoiber, 2011). When teachers and administrators are coordinated in their efforts to improve student behavior, and when behavioral expectations are consistent for all students school-wide, the school climate can shift altogether.

As more research supporting the link between social and emotional competence and academic success has come forward—with one meta-analysis demonstrating 11–17% improvements in academic performance (Payton et al., 2008)—educators have begun to promote SEL instruction, not just for at-risk students, but for all students. In some states, such as Illinois and New York, school-wide instruction in SEL is becoming a state-wide standard (Payton et al., 2008).

Researchers stress SEL as a goal for schools firstly because of its potential to prevent school failure (Stoiber, 2011). As universal interventions, SEL programs serve a preventive function, addressing Level 1 of positive behavior support's (PBS) three-tiered support model. The purpose of a universal prevention intervention is to reduce the number of students who ultimately end up at the selected (Level 2) and indicated (Level 3) support levels.

Secondly, researchers argue for school-wide social and emotional instruction based on practical grounds. Almost all children attend school, and they are in school most of the day. Because schools have access to virtually all children and have the means to educate them, researchers suggest that this important venue should not just encourage students to achieve academically but also help them become responsible, contributing, and healthy citizens (Zins et al., 2004).

Strong Kids was designed to function primarily as a universal preventive intervention and to fit seamlessly within an instructional program (Merrell et al., 2007). Additionally, it was designed to be low-cost, low-technology, easy to implement, and to be taught by regular classroom teachers. This study aimed to evaluate the curriculum in the setting (school-wide, universal) and delivery format (classroom teachers), for which it was designed, and as such it comprises the largest study of the *Strong Kids* program to date. Because feasibility concerns are

often a barrier to effective implementation of SEL programs, this study also sought to evaluate whether teachers, with very limited support, could implement the curriculum as it was designed, and whether they viewed the program as socially valid. Six research questions were addressed in this study:

1. Did the universal implementation of the *Strong Kids* curriculum have a significant effect on students' prosocial behaviors, as measured by teacher's ratings on the peer-relations subscale of the SSBS-2, relative to a control group that did not receive the curriculum?

2. Did *Strong Kids* have a significant effect on students' internalizing behaviors, as measured by teacher ratings of students on the internalizing subscale of the SSRS, relative to a control group that did not receive the curriculum?

3. Within the treatment group, did those students previously identified as at-risk for internalizing and externalizing disorders by the SSBD and ESP, have significantly different outcomes on a measure of prosocial peer-related behaviors, the SSBS-2, than the students among the treatment group not identified as "at-risk"?

4. Within the treatment group, did those students previously identified as at-risk for internalizing and externalizing disorders by the SSBD and ESP, have significantly different outcomes on a measure of internalizing symptoms, the SSRS-I, than the students among the treatment group not identified as "at-risk"?

5. Were the treatment group teachers able to implement the curriculum with fidelity (per the lesson outlines in the curriculum manual), as measured by classroom observations and fidelity checklists completed by research assistants?

6. Did the teachers who implemented the *Strong Kids* curriculum view it as socially valid, as measured by a social validity questionnaire and a focus group discussion?

Literature Review

The mental and behavioral health issues facing students are of great concern. Evidence suggests that if these issues remain untreated, they will likely lead to a host of negative consequences such as school dropout, delinquency, unemployment, depression, and incarceration (Asher & Coie, 1990; Merrell & Gimpel, 1998; Rudolph & Asher, 2000).

Student Mental Health Issues

The US Department of Health and Human Services has estimated that as many as 20% of children have mental health problems requiring treatment, and of these, 75–80% do not receive treatment (US Department of Health and Human Services, 2001). Student mental health disorders can typically be classified into two categories; externalizing disorders and internalizing disorders. Externalizing disorders are often manifested as disruptive behaviors, such as aggression, defiance, and hyperactivity (Greenberg et al., 2001; Sanders, Merrell, & Cobb, 1999). These behaviors are considered under-controlled. Internalizing disorders include depression, anxiety, and social withdrawal, and are considered over-controlled behaviors (Sanders et al., 1999). It is more common for teachers to focus on the challenge of dealing with students with externalizing disorders because of the disruptive nature of these disorders, while students with internalizing disorders are often overlooked as they are less likely to be disruptive. However, unaddressed internalizing disorders may have significant consequences at both the individual and societal level (Bayer et al., 2011).

Risk factors for student mental health problems. Many factors have been identified as contributors to the mental health problems of children. Among these are well-known risk factors such as poverty, maltreatment, family dysfunction, uncaring parenting, and adverse living circumstances (Doll & Lyon, 1998). These factors have shown to be strongly correlated with

negative outcomes such as substance abuse, violent behavior, school dropout, and teenage pregnancy, as well as mental health disorders (Cowen, Wyman, Work, & Parker, 1990; Zolkoski & Bullock, 2012).

Risk factors can be classified as individual or peer, family, school, or community. The Search Institute has identified many risk factors specific to each category. For example, the individual and peer risk factors for substance abuse include alienation, rebelliousness, and having friends who engage in the problem behavior. Family risk factors for substance abuse include family conflict and family involvement in the problem behavior. Common school risk factors include academic failure beginning in elementary school, and low commitment to school. Within the community, certain factors such as extreme economic and social deprivation, transition, and mobility play a part in increasing a child's risk for later substance abuse (Search-Institute.org). Zolkoski and Bullock (2012) categorized risk factors more simply as either biological or environmental. Biological risk factors would include congenital defects, drug-addicted mothers, mothers who did not have sufficient nutrition during pregnancy, and low birth weight. Environmental risk factors would include perinatal stress, parental mental illness, chronic familial discord, and harsh parenting (Werner, 1995; Werner, 2000). In the past, researchers sought to identify specific risk factors, with the hope of alleviating or removing the factors that have a causal connection to specific behavioral or social maladjustments (Offord, 1996). However, it has proven difficult to identify the causal mechanisms which tie risk factors to specific outcomes, and even if identifiable, the risk factors are not easily eliminated (Doll & Lyon, 1998).

As researchers sought to understand and prevent the development of psychopathology, they noted that some children progressed well even when exposed to significant risk factors.

Recognizing that some children achieved success despite these risk factors, researchers began to concentrate on detecting protective factors (Zolkosk i& Bullock, 2012). Instead of focusing on single risk factors and their effects, researchers are now promoting broad approaches which target multiple factors and which seek to promote positive and protective traits within the child—a concept known as resilience (Doll & Lyon, 1998).

Fostering resilience among students. Resilience is generally understood as achieving successful outcomes despite the presence of harmful circumstances (Masten, 2001). Resilience is conditional upon there "being an identified risk or challenge followed by some defined measure of positive outcome" (Zolkoski & Bullock, 2012, p. 2296). Resilience is not considered a dichotomous attribute that an individual has or does not have, but rather is thought to occur along a continuum, changing over time and contexts. Although many children who grow up in adverse conditions have negative outcomes, some children do emerge successful. Researchers have been trying to identify what makes these resilient kids different—why they succeed when others in similar circumstances fail.

The foundational research on resilience was the Kauai Longitudinal Study, conducted by Emmy Werner in Hawaii (Werner, 1995). This study tracked 689 children, all born in 1955. These children were followed up with at ages one, two, ten, eighteen, and thirty-two. Thirty percent of the children were considered high-risk because they were born into chronic poverty, had experienced perinatal stress, or lived in family environments troubled by chronic discord, divorce, or parental psychopathology. Werner found that two-thirds of the children who had experienced four or more risk factors by the age of two developed serious learning or behavior problems by age ten, or had delinquency records, experienced mental health problems or

pregnancy, by age eighteen. However, one-third of those who had experienced four or more such risk factors developed into competent, confident, caring adults (Werner, 1995).

Just as risk factors, protective factors were found to occur in both the individual and community spheres. Werner (2000) identified individual protective factors at several developmental stages. Among infants and young children she found that an important protective factor was having temperamental characteristics that elicited positive responses from a wide range of caregivers. These temperamental characteristics included being affectionate, good-natured, and active. It was posited that such children were better able to recruit competent adult caregivers because they had an easy temperament. During middle childhood and adolescence other factors were identified as being protective, including having good communication and problem solving skills and being outgoing, autonomous, nurturing, and emotionally sensitive. Resilient adolescents were also considered more empathetic and socially perceptive. Teachers of these students noted their ability to control impulses and focus on school tasks. Additionally, students who had flexible coping strategies, belief in their own effectiveness (internal locus of control), and a positive self-concept, displayed better outcomes. Intelligence and scholastic competence were also found to be correlated with resilience. It was theorized that having higher intelligence (or at least average intelligence) enabled resilient students to better appraise the stressful events in their life and to generate more effective strategies for coping (Werner, 2000).

Several protective factors within the community were also identified by Werner (2000). She found that children who were able to establish a close bond with at least one competent and emotionally stable adult, who was attuned to their needs, fared much better. This bond was thought to be important to a child's ability to develop a basic sense of trust. This close bond often came from substitute non-parent caregivers such as extended family members,

grandparents, and teachers. Werner noted that all of the resilient high-risk children in the study could point to at least one teacher who was an important source of support to them and who were considered positive role models. Among the resilient children, the school atmosphere was more likely to be responsive, nurturing, organized, and predictable. Resilient children tended to be well-liked by classmates and to have one or more close friends. Werner found that resilient children were more likely to have come from households with rules and structure, in which a male served as a model of identification (for boys), and in which there was some encouragement of emotional expressiveness. Other community protective factors included organizations that provided opportunities at important life transitions, such as adult education programs, community colleges, military service, and church communities (Werner, 2000).

Masten, Best, and Garmezy (1990) described resilient children in similar terms. They suggested that children who experience chronic adversity fare better and recover more successfully when they have positive relationships with competent adults, are engaging to other people, and are good learners and problem solvers (Masten, Best, &Garmezy, 1990).

One focus of SEL programs is to develop resiliency within the individual. As researchers have noted, the ability to form close relationships with caregivers and peers is an important protective factor. A child's ability to build and maintain such relationships depends upon social and emotional competence, made up of the skills and knowledge of naming and recognizing emotions, perceiving other's emotions (perspective taking), being able to regulate emotions, and solving interpersonal problems (Crick & Dodge, 1994; Denham et al., 2003; Payton, Wardlaw, Graczyk, Bloodworth, Tompsett, &Weissberg, 2000). As a result, many preventive SEL programs incorporate these skills into their curricula. The *Strong Kids* curriculum aims specifically to address the cognitive, behavioral, and affective characteristics of

resilience and claims that these aspects of resilience can be "systematically taught and learned" (Merrell et al., 2007, p. 7).

School-based mental health practices. The social and emotional skills and knowledge necessary for healthy development are often learned naturally in traditional settings, such as within the home or other community structures. However, additional support is often needed, and schools are considered one of the most effective settings in which the protective traits characteristic of resiliency can be fostered (Doll & Lyon, 2000). Schools have a well-established structure as well as the personnel and resources to convey skills and knowledge. Also, because enrollment in school spans most of a child's developmental stages, there is an extended opportunity to maintain and guide proper emotional and behavioral skills. Schools, as institutions, are effective venues for providing social and emotional skills and other mental health services (Zins, Bloodworth, Weissberg, & Walberg, 2004). In fact, as many as 70–80% of the mental health services children do receive are through schools (Rones & Hoagwood, 2000).

The mental health services provided in schools vary widely. In the past, students referred for mental health services participated in individual interventions or were selected as part of small "pull-out" groups. Some popular approaches, such as the "get tough approach," have proven ineffective, perhaps even worsening the original problems (Merrell et al., 2007). These reactive treatments have largely been inadequate in meeting students' mental health needs. Many challenges exist in providing needed mental health care to children. Insufficient resources stretch schools beyond their capacity to deliver the necessary services. Many intervention approaches, serving primarily high-risk students, drain educators' time and resources. As an attempt to ameliorate some of these problems, researchers are beginning to evaluate and promote preventive and system-wide approaches to mental health support. The universal approach allows

for reaching more students and does so early enough to potentially prevent emotional and behavioral problems from elevating to the more high-risk levels. Because a program's feasibility and sustainability is critical to its long-term success, the factors that affect the adoption of a program by teachers or school personnel has also been a subject of research interest (Merrell, 2008).

Social and Emotional Learning

One approach, which is beginning to gain support, is social and emotional learning (SEL). Instruction in SEL seeks to equip students with the skills and knowledge necessary to handle the persistent problems they face. SEL has been defined as "the process of acquiring core competencies to recognize and manage emotions, set and achieve positive goals, appreciate the perspective of others, establish and maintain positive relationships, make responsible decisions and handle interpersonal situations constructively" (Durlak, Weissberg, Dymnicki, & Taylor, 2011, p. 406). A lack of emotional knowledge and accompanying social and emotional skills has been linked to peer-rejection, which in turn may result in depression, social withdrawal, and aggressive, disruptive, and antisocial behaviors (Izard, Fine, Mastow, Trentacosta, & Campbell, 2002). Social and emotional competency also has a notable influence on academic achievement. Students unable to regulate their emotions and behaviors will likely face difficulty achieving academic skills and may impede the learning of other students (Quinn, Osher, Hoffman, & Hanley, 1998). Students' competence in social and emotional learning has been clearly linked to academic success (Maguin & Loeber, 1996; Mcleod & Kaiser, 2004; Walker, Ramsey, & Gresham, 2004). Students who are socially and emotionally competent create a class atmosphere conducive to learning, and as a result teachers can devote less attention and energy to managing behavioral problems and disruptive students.

SEL programs are most effectively implemented as part of a school-wide system. Such an approach is coordinated, comprehensive, and sustained (Greenberg et al., 2003). It is considered a "school-reform" approach (CASEL, 2002). SEL can be implemented in conjunction with a Positive Behavior Support (PBS) model of behavior management. This model establishes clear school-wide rules and policies, which are then implemented throughout all schools settings (e.g., in the classroom, lunchroom, and playground). Critical to the model is participation by all teachers and administrators, who follow similar patterns of reinforcing positive behaviors and prosocial activities (Merrell, Gueldner, & Tran, 2008; Sugai & Horner, 2002).

Two of the most promising aspects of SEL are its focus on prevention and its universal applicability. SEL can be taught in regular classroom settings to all students, whether or not they are identified as at-risk. Because of the universal preventive approach, many disorders which frequently go unnoticed and untreated, such as internalizing disorders, may be addressed. In the three-tiered model (prevention triangle) of public health, 80% of students (comprising the primary level of the triangle) can benefit from instruction which promotes resilience and other positive behaviors (US Department of Education, 2004). As for the remaining 20% of students, though they may benefit from universal interventions, they will likely require additional interventions because of the severity of their difficulties. Traditionally most efforts and resources have gone toward treating the few high-risk students at the top of the triangle. However, a comprehensive approach, which emphasizes the early identification and prevention of disorders among the general student population, may help to reduce the number of students who end up at the higher levels of need.

When school administrators and teachers consider adopting an SEL program, care should be taken to ensure that the program has been validated by evidence-based research. In order to be funded, federal mandates require programs to be based on scientific research (Weissberg, Resnik, Payton, & Utne O'Brien, 2003; Zins et al., 2004). In 1994, as part of the CASEL (Collaborative for Academic, Social, and Emotional Learning) conference, researchers and educators defined SEL, established criteria for SEL programs to be considered effective, and began reviewing and endorsing SEL programs. This information was then made available to policymakers and educators (Graczyk, Greenberg, Elias, & Zins, 2000). Many SEL programs have shown significant results, including better peer and adult relationships, improved interpersonal skills, and improved academic performance. Additionally, problem behaviors such as violence, alcohol and drug use, and truancy have shown decreases as a result of SEL (Greenberg et al., 2003).

Meta-analyses of SEL studies. Several meta-analyses of SEL programs have been conducted. One oft-cited meta-analysis reviewed 317 studies involving 324,303 students between grades K–8 (Payton et al., 2008). Results indicated that SEL programs have positive effects on students' social-emotional skills; attitudes towards self, school, and others; social behaviors; conduct problems; emotional distress; and academic performance. On average, students experienced an 11–17% gain on achievement test scores. Payton et al. (2008) noted that SEL interventions were effective across multiple settings: in school; after school; and in urban, suburban, and rural areas. The same results were found for racially and ethnically diverse students. Follow-up data also indicated that effects were maintained over time, although they were not as strong as immediately after the intervention. It was also shown that programs were more effective when implemented by the school staff (e.g., classroom teachers rather than

outside researchers; Payton et al., 2008). Researchers concluded that SEL programs "are among the most successful youth-development programs offered to school-aged youth" (Payton et al., 2008, p. 4).

A more recent meta-analysis examined specifically those SEL studies which were universal interventions; that is, interventions intended for all students, including those not identified as having preexisting behavioral, emotional, or academic problems (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). The researchers aimed to answer several questions that had arisen as SEL programs proliferated:

- What outcomes are achieved by interventions that attempt to enhance children's emotional and social skills?
- Can SEL interventions promote positive outcomes and prevent future problems?
- Can programs be successfully conducted in the school setting by existing school personnel?
- What variables moderate the impact of school-based SEL programs? (Durlak et al., 2011).

The sample consisted of 213 studies involving 270,034 students from grades K–12. The meta-analysis had very little overlap with previous reviews, with only 12% of the studies having been previously reviewed elsewhere. Just under half of the studies involved randomized designs, and 75% of the studies had been published within the past 20 years. There were six dependent variables (outcomes) examined by this meta-analysis: (1) social and emotional skills, (2) attitude toward self and others, (3) positive social behaviors, (4) conduct problems, (5) emotional distress, and (6) academic performance.

Results indicated that "students demonstrated enhanced SEL skills, attitudes, and positive social behaviors following intervention, and also demonstrated fewer conduct problems and had lower levels of emotional distress" (Durlak et al., 2011, pp. 412–413). Academic performance also improved significantly (Effect Size (ES) = .27 and .33 for test scores and grades, respectively). Mean effect sizes ranged from .22 to .57 across the six outcome categories. Thirty-three of the studies collected follow-up data for at least six months after the completion of the intervention. All of the mean effect sizes remained significant at follow-up.

The meta-analysis also evaluated factors that moderated outcomes. Results suggested that proper implementation of the intervention functioned as a moderator of outcomes. Studies which reported problems with implementation achieved significant effects in only two outcome categories. A second moderating factor was whether the program's design met what the authors described as SAFE (Sequenced, Active, Focused, Explicit) criteria. This acronym refers to whether the program makes use of "a sequenced step-by-step training approach, uses active forms of learning, focuses sufficient time on skill development, and has explicit learning goals" (Durlak et al., 2011, p. 408). The studies were also classified according to whether the intervention was taught by classroom teachers or by non-school personnel. Programs taught by classroom teachers resulted in significant outcomes in all six categories, whereas those taught by non-school personnel achieved significance in only three outcome areas. Interestingly, it was found that multi-component programs (those involving a home or community component) were not more effective than single-component programs. It was thought that the multi-component programs were less likely to follow the SAFE guidelines and more likely to experience problems with implementation (Durlak et al., 2011).

Researchers noted the importance of the 11% academic achievement gain. They offered several rationales for why improved social and emotional competence might lead to better academic performance. They suggested that students who experience an increase in self-awareness and confidence regarding their learning capacities are likely to "try harder and persist in the face of challenges" (Durlak et al., 2011, p. 417). They also noted that when students display self-discipline, manage their stress, organize their approach to work, and set high academic goals, they get better grades. It was suggested that by having better problem solving skills, students are able to overcome obstacles and make responsible decisions about studying and doing homework. These improvements occur within the individual student. However, improvements can also occur interpersonally and within the school environment as a result of systemic or school-wide SEL instruction, which can likewise improve students' academic performance. Researchers noted the following means through which academic performance is enhanced:

> Peer and adult norms that convey high expectations and support for academic success; caring teacher-student relationships that foster commitment and bonding to school; engaging teaching approaches such as proactive classroom management and cooperative learning; safe and orderly environments that encourage and reinforce positive classroom behavior. It is likely that some combination of improvements in student social-emotional competence, the school environment, teacher practices and expectations, and student-teacher relationships contribute to students' immediate and long-term behavior change. (Durlak et al., 2011, p. 418)

The authors noted that while many educators feel pressure to meet academic demands (such as those under No Child Left Behind), they might welcome SEL programs that would potentially bring about an 11% boost in academic achievement.

Barriers to effective implementation of SEL programs. SEL has demonstrated the capacity to improve students' mental health and academic achievement and to better the school environment, yet successful implementation of such programs lags far behind knowledge of their potential. Researchers have been able to demonstrate efficacy of SEL programs; however, consistently demonstrating effectiveness has been more difficult (Schoenwald & Hoagwood, 2001). Under tightly-controlled conditions, such as part of a research study, a program may produce desired outcomes, showing "efficacy," but this does not necessarily result in the more difficult to obtain "effectiveness" in real-life settings (Walker, 2004). Two primary reasons for this discrepancy include a lack of support by educators and an inability to implement the program with fidelity.

Programs that are not part of the standard curriculum are often viewed as educational "fads" (Doll & Lyon, 1998; Payton et al., 2000). Teachers, often under pressure to teach all of the required academic material and meet the demands of policies such as No Child Left Behind, feel as if there is little time left for "non-assessed programming." Teachers may begin to follow the dictum "what gets inspected gets expected" (Greenberg et al., 2003, p. 472). SEL programs and other nonessential programming must thus compete with high-priority curricula such as literacy and numeracy (Seifer, Gouley, Miller, & Zakrisky, 2004). There has been the assumption that SEL necessarily competes with academics, as if they are two distinct goals, each pursuable only at the sacrifice of the other (Elias et al., 1997). To improve the acceptability of

SEL programs among teachers, some researchers have suggested combining the social-emotional lessons with literacy curricula (Joseph & Strain, 2003; Seifer et al., 2004).

Another factor which contributes to the reluctance educators feel toward accepting SEL efforts is the existence of many available programs which are short-term and fragmented. Such programs, which are not well organized and do not plan for follow-through in subsequent years, decrease educators' support (Doll and Lyon, 1998). Programs often come and go with little accountability as to whether they actually accomplished what they had set out to do. Complicating the problem further are programs which lack research-based evidence but are presented alongside effective programs, weakening the overall perception of the efficacy of SEL programs. Educators become disillusioned with such programs when high expectations for improvement are unmet (Sternberg, 1997).

Even when schools decide to implement research-based SEL instruction, successful outcomes are often not achieved. Results frequently don't generalize from the study to the "real world" classroom. Often schools do not have adequate resources to appropriately train staff and teachers, which then compromises implementation fidelity. Although an SEL curriculum may have demonstrated efficacy, unless it can be correctly implemented it is unlikely to be of real benefit (Durlak et al., 2011)

The issues of effective implementation and social validity are perhaps of greater importance than even the development of additional programming (Domitrovich & Greenberg, 2000; Greenberg et al., 2003). Until recently, little attention has been placed on implementation integrity (Durlak & Wells, 1998). Implementation integrity, also referred to as treatment integrity or treatment fidelity, is defined as "the degree to which an intervention is implemented as planned or intended" (Gresham, 2009, p. 534). Researchers are now beginning to study what

characterizes the programs that are able to be successfully integrated into schools. Treatment integrity is generally linked to social acceptability of the treatment (Lane & Beebe-Frankenberger, 2004). If implementers see the treatment as socially valid—that is, if they feel the goals of the treatment are important and the outcomes feasible—they are much more likely to implement the intervention as it was designed.

Several factors have been identified which may predict the degree of implementation integrity. These include: intervention complexity, implementation time, materials required, views about effectiveness, and implementer motivation (Gresham, 1989). If a treatment takes too much time or is too complicated, it is unlikely to be implemented as intended. Researchers have also found that if the treatment requires materials outside of a regular classroom, and if more than one adult is needed for implementation, treatment integrity is compromised (Yeaton & Sechrest, 1981). When evaluating programs for successful implementation outcomes, questions such as who will implement the intervention, how they will be monitored and supported, and whether the curriculum can be adapted to suit specific needs, should be posed (Walker, 2004). Adequate training of staff and continued provision of support once the program is underway are also priorities for successful SEL programs (Payton et al., 2000). It is recommended that outcomes should be measurable and made available to educators for evaluation, so that implementations efforts can be modified to achieve desired results (Greenberg et al., 2003).

Characteristics of high-quality SEL programs. At the 1994 Collaborative to Advance Social and Emotional Learning (CASEL) conference, criteria were established by which to evaluate SEL programs. These were divided into two categories: the content of SEL programs, and the features of the programs (Payton et al., 2000). Required elements of recommended programs include instruction in (1) awareness of self and others, (2) positive attitudes and values,

(3) responsible decision making, and (4) social interaction skills (Payton et al., 2000). Some features of recommended programs are that they have well-organized and easy-to-follow lessons and that they provide tools for monitoring program implementation (Payton et al., 2000). Other researchers have suggested that programs should be integrated into the existing school curriculum and be used in regular education classrooms, serving as universal interventions (Payton et al., 2000). An ideal program should not require high levels of funding, as costly programs are not sustainable and result in short-term implementation and only limited successful outcomes (Walker, 2004). An ideal program would also be coordinated to allow for multi-year instruction, from preschool through high school (Greenberg et al., 2003). Crone, Horner, and Hawken suggested that an SEL effort may take 3–5 years to make a positive impact in school change (2004). Another finding indicates that effective programs make use of structured manuals and curricula to ensure consistency in program delivery (Greenberg et al., 2003). Instead of focusing on specific risk factors, a program should focus on the development of resiliency factors. For a SEL program to be successful, it requires the support of teachers, administrators, and parents. In a study of one SEL program, PATHS, researchers found that positive child outcomes only reached significance when principals and teachers were stratified by support of the program and their skill in teaching (Kam, Greenberg, & Walls, 2003). Educating these parties about the benefits of SEL on academic achievement and how it can fit into the mission of the school is important to successful implementation and significant positive student outcomes.

Application of SEL to young internalizing students. There has been significantly less research to explore the prevention of and intervention for internalizing disorders in school-aged children than research for disruptive externalizing disorders (Greenberg et al., 2001). The most

common internalizing disorders among school-age children are anxiety and depression, with anxiety symptoms often preceding the onset of depression. These two internalizing disorders also have the greatest impact on school performance (Gillham et al., 2006; Oswald & Mazefsky, 2006). The research area of preventing and treating childhood depression is "seriously underdeveloped" (Oswald & Mazefsky, 2006, p. 446). Oswald and Mazefsky suggested that the evaluation and development of treatments should be a priority among mental health professionals. Internalizing disorders evident in children not only predict impaired mental and social health as adults, but also have immediate adverse effects on young students' academic performances due to impaired concentration, attention, memory, and other cognitive abilities (Davis, 2006). Interventions that are preventive and universal have the benefit of potentially reaching students who otherwise wouldn't receive treatment, as depression is typically under-diagnosed and undertreated (Hirschfeld, Keller, Panico, & Arons, 1997).

Spence, Sheffield, and Donovan (2003) commented that research aimed at preventing depression in youth is in its infancy, and in particular, studies that incorporate universal rather than selective or indicated interventions are few. They noted several benefits of universal preventive efforts such as a lack of stigma, greater participation, lower dropout rates, and the ability to reach large numbers of students who have a wide range of risk factors.

The ability to regulate and understand emotion, known as emotional competence, has been shown to be predictive of positive outcomes such as peer acceptance, high incidence of pro-social behavior, and high academic achievement (Trentacosta & Izard, 2007). Development of these abilities during childhood is particularly important (Denham, 1998). Because students interact daily with their peers, the early school years are an ideal time for implementation of prevention efforts aimed at increasing social and emotional competence (Seifer, Gouley, Miller,

& Zakrisky, 2004). Young students are in an environment well-suited for the frequent practice of learned skills.

Middle childhood is the period in which a child transitions into school. With that transition come many challenges and opportunities. A child is expected to pay attention, interact extensively with peers, and lay the basis for academic achievement. Though many SEL programs have been developed and tested, relatively few have focused on the needs of this younger age range and the benefits of early prevention efforts. Joseph and Strain (2003) reviewed SEL curricula aimed at preschool populations. Various criteria, with a strong emphasis on social validity and implementation integrity, were used to evaluate 10 SEL programs. Though the interventions varied widely in design, each showed some efficacy. Lessons ranged in number from 12 to 140, with implement time varying from 10 minutes three times a week to 120 minutes once a week. Most programs were focused on externalizing disorders, were taught exclusively to at-risk populations, and were implemented by mental health professionals or graduate students (Joseph & Strain, 2003). Some research indicates that primary prevention programs show the strongest benefits for children between the ages of two and seven (Durlak & Wells, 1997).

Although the implementation of a preventive intervention would be ideal as early as possible, a system-wide approach can only be practically achieved once a child has entered school. The need for early interventions is strengthened by data that suggests that by the time a child reaches the third grade social maladjustments appear to remain stable. Similarly, many agree that after a certain point anti-social behaviors may be regarded as chronic, less likely to respond to treatment, and perhaps no longer curable but only manageable (Sprague & Walker, 2000; Walker, Ramsey, & Gresham, 2004).

The *Strong Kids* program. *Strong Kids* (Merrell et al., 2007) has a particular focus on the prevention of internalizing disorders and the fostering of prosocial behaviors and competencies. A potential strength of the *Strong Kids* program is its ease of implementation. Because it is low-cost, can be taught in classrooms by the classroom teacher, and has a manual with semi-scripted and self-contained lessons, many of the typical concerns regarding feasibility may be lessened.

Given that feasibility was considered a high priority in the development of this program, *Strong Kids* has the potential to integrate what research has already shown to be effective into common classroom practices. The *Strong Kids* SEL program consists of five separate curricular components. The components are divided by age of the intended audience, which spans from preschool students to high school students, and each component is focused on a specific developmental period (Merrell, 2010). For example, the two *Strong Start* programs, covering preschool through second grade students, do not require students to read or fill out structured worksheets and they do not place as many cognitive demands on the students. The components for older students (*Strong Kids, Strong Teens)* use more sophisticated language and make use of examples that better portray the types of social situations they are likely to face. The *Strong Kids* curricula consist of 10–12 lessons, each ranging in length from 35 to 50 minutes, intended to be taught weekly. The goal of the development of the *Strong Kids* program was to promote resiliency and enhance social-emotional outcomes for students. Merrell (2010) suggested that although *Strong Kids* can be used to promote resilience in at-risk children, it could also be simultaneously used as a universal primary prevention, aiding the mental health of all children. Although it can be used with high-risk *indicated* populations, Merrell maintained that the most appropriate use for the *Strong Kids* program is at the *universal* and *selected* levels.

The curriculum was also designed to be brief, cost-effective, and easy to use. Merrell (2010) suggested that although there are many highly complex evidence-based interventions, these are rarely used by actual educators as they require much more training, time, and resources than most school districts can afford. As a reaction to this problem, the development of the *Strong Kids* program was guided by the principles of feasibility and simplicity, in which only the most essential components were retained (Merrell 2010).

Merrell (2010) reviewed research conducted on the *Strong Kids* program. At that point, 15 studies had been conducted, the majority of which employed a "hybrid model" research design. This type of design "attempts to maintain as many controls as possible," but balances these controls with the realities of conducting research within the complex and often "messy" school environment (Merrell, 2010). Many of the gold standards of efficacy research, such as randomization, are often not feasible within the school context, especially when an intervention is implemented class- or school-wide. Studies of the *Strong Kids* programs have been conducted in a variety of settings and with several different delivery formats. Studies have examined outcomes in residential treatment settings and special education classes, and among at-risk students, Latino immigrant high school students, and general education elementary school students. Studies have also evaluated whether outcomes differ based on pacing (lessons delivered twice weekly versus once), and whether there was regular consultation and feedback with teachers. In addition to the efficacy of the program, feasibility and social validity have also been evaluated by several studies. Researchers across most studies have found gains in "curriculum-related knowledge of healthy social and emotional behaviors" (Merrell 2010, p. 65) for those students who participated in the Strong Kids program, with an effect size near 1.0 (Castro, 2006; Harlacher & Merrell, 2010; Marchant, Brown, Caldarella, & Young, 2010;

Nakayama, 2008; Tran, 2007). Changes in behavior were also evaluated by several studies. There has been some evidence of symptom reduction, particularly for internalizing behaviors, reporting effect sizes of .48 and .77 (Caldarella, Christensen, Kramer, & Kronmiller, 2009; Marchant et al., 2010), although other studies have not found this change in behavior (Gueldner & Merrell, 2011; Nakayama, 2008). Merrell (2010) hypothesized that reductions in problem behavior were often not demonstrated because many of the studies were conducted with universal populations (i.e., general education classrooms) that had low problem behaviors to begin with.

Rather than focusing on problem behaviors, some studies have examined prosocial and emotionally competent behaviors, and meaningful gains have been noted in these areas, as measured by teacher ratings of students' peer relations skills.(Harlacher & Merrell, 2010; Kramer, Caldarella, Christensen, & Shatzer, 2009; Nakayama, 2008). Feasibility, or treatment fidelity, was measured formally by recording the degree of adherence to the curriculum outline. High levels of treatment fidelity were consistently reported by all studies that measured this variable. Likewise social validity, measured through surveys and interviews of students and implementers, was also rated strongly (Caldarella et al., 2009; Feuerborn, 2004; Gueldner & Merrell 2011; Harlacher & Merrell, 2010; Isava, 2006; Kramer et al., 2009; Levitt, 2008; Marchant et al., 2010; Nakayama, 2008; Tran, 2007; Whitcomb, 2009). Merrell concluded that the *Strong Kids* program has consistently produced meaningful results, and has done so under "real-world conditions" (Merrell, 2010, p. 66). Furthermore these results have been obtained without "extensive external supports," an indication of the feasibility of the program (Merrell, 2010, p. 66).

Method

Participants and Setting

This study was conducted in two suburban Utah elementary schools, both within the same school district. The treatment school, which implemented the *Strong Kids* curriculum school-wide, was a professional development school and had an ongoing partnership with the university sponsoring this research. The control school was selected on the recommendation of the district superintendent, because it was demographically very similar to the treatment school.

The treatment school consisted of 348 student participants. School demographics indicated that 61% of students were Hispanic, 37% White, and 2% were of other ethnicities. Approximately 82% of the students qualified for free or reduced lunch. Student participants were grouped within 15 regular education classes and two moderate special-education classes. Class size averaged 22.5 students. Seventeen teachers at the treatment school participated in the study. Teachers had an average of 8.35 years of teaching experience (SD = 7.38).

At the control school there were 266 student participants. School-wide demographic statistics indicate that 53% of students were Hispanic, 43% white, 2.3% Pacific Islanders, and the remaining 2% were of other ethnicities. Approximately 82% percent of students at the control school qualified for free or reduced lunch. Student participants were grouped within 11 classrooms, and class size averaged 23.3 students. The 11 participating teachers had an average of 9.22 years teaching experience (SD = 9.40). Because of their low-income and at-risk status, both schools were considered "Title I" schools.

Passive consent was obtained from the students' parents or guardians at both schools. Because of the high numbers of parents who were undocumented immigrants, school administrators stated that parents might be reluctant to sign a consent form, fearing that this

formal documentation could increase their risk. For this reason, passive consent forms which described the study were distributed and parents were given the option of withdrawing their child from participation by contacting the researchers or school principal. No parents withdrew their child from participation. All teachers at the treatment school (except two teachers of severe special-education classes, who were excluded from the study due to the severity of their students' disabilities) consented to participate in the study. The prospective study was presented to the control school during a faculty meeting, and 11 teachers (approximately half) volunteered to participate in the study. All participating teachers were paid a total of $100 for their completion of the rating scales on all of their students at pretest and posttest.

Screening

Prior to the start of the study and separate from the study, teachers at the treatment school had been asked by school administrators to identify the students most at risk for emotional and behavioral disorders. The information was used in this study to identify at-risk students, allowing an evaluation of how at-risk students respond to the curriculum compared to non-at-risk students. At-risk students had been identified using the Systematic Screening for Behavior Disorders (SSBD; Walker & Severson, 1992). The first stage of the screening process required teachers to rank their students according to the degree to which they exhibited externalizing or internalizing behaviors. In the second stage teachers evaluated the top-ranked students by filling out a checklist of critical events and a completing a scale which reported the frequency of adaptive and maladaptive behaviors. Test-retest reliability of stage 1 was reported at .72 for internalizing behavior and .79 for externalizing behavior. Internal consistency was estimated to be above .80 for the Stage 2 subscale of adaptive and maladaptive behaviors (Walker & Severson, 1992). Because the SSBD is not intended for students younger than 6, a similar

screening instrument, the Early Screening Project (ESP), was used to identify the kindergarten students most at-risk (Walker, Severson, & Feil, 1995). Like the SSBD, the ESP required teachers to identify students at risk for internalizing and externalizing behavior disorders in a three-stage process. For the purposes of this study, only stages one and two were completed, as had been done in a previous study of *Strong Kids* (Marchant et al., 2010). This study thus omits an optional third stage in which observations of identified students are conducted.

Independent Variable

The independent variable was the implementation of the *Strong Kids* curriculum. There are five levels with separate instructional manuals within the *Strong Kids* series (*Strong Start Pre-K, Strong Start K–2, Strong Kids 3–5, Strong Kids 6–8,* and *Strong Teens*), and each is suited to the child's developmental stage. For this study, the *Strong Start K–2* and the *Strong Kids 3–5* were used. Although sixth grade classes were included in the study, *Strong Kids 3–5* was used for these classes as the material was deemed appropriate for their developmental level. The *Strong Kids* programs focus on fostering prosocial behaviors and competencies and preventing internalizing disorders. The curricula are "highly structured" and "partially scripted." Lessons are intended to last approximately 35–50 minutes. S*trong Start* is made up of 10 lessons and two booster lessons, covering topics such as recognizing one's own and others' feelings, handling anger and anxiety, being a friend, and solving problems. These topics are taught through direct instruction, example scenarios, and role-play activities. The program also relies heavily on the use of children's literature—a story is read each lesson and the teacher highlights specific principles learned that day. Additionally, a stuffed animal is used as a "mascot" for illustrating example scenarios and role-plays. A few other materials (e.g., an overhead projector, paper, markers, etc.) are needed for the implementation of the program. Each lesson has a

"bulletin" intended for parents that is sent home with students. This bulletin covers the main concepts of the lesson and encourages parents to review the concepts and practice the skills with their child.

Strong Kids 3–5 consists of 12 lessons and one booster lesson. Lessons cover topics such as "Understanding Your Feelings," " Dealing with Anger," "Understanding Other People's Feelings," "Clear Thinking," "Solving People Problems," and "Letting Go of Stress." Some of the main goals of *Strong Kids* are to prevent and reduce depression and anxiety, to teach the link between thoughts and emotions, to help children identify and dispute maladaptive or irrational thoughts and beliefs, to teach cognitive and behavioral relaxation techniques, and to teach effective communication and problem solving skills (Merrell et al., 2007). Lessons are taught through direct instruction, role-plays, and example scenarios. Most lessons also include handouts and short homework assignments.

Dependent Variable and Measures

The dependent variable in this study was students' social and emotional competence. Two aspects of social and emotional competence were specifically measured: internalizing behaviors and peer-related prosocial behaviors. The internalizing behaviors were measured through teacher ratings of each student on the internalizing subscale of the Social Skills Rating System (Gresham & Elliot, 1990) as done in other studies of *Strong Kids* (Caldarella et al., 2009; Kramer et al., 2010). On this 6-item scale, students' behaviors were rated on a 3-point Likert scale, with responses of "never", "sometimes," and "often." This measure included items such as "*appears lonely," "is easily embarrassed,"* and "*acts sad or depressed."* This measure is norm-referenced and standardized. The internalizing subscale of this measure has a reported internal consistency of .79 for male elementary students and .77 for female students. It has a test-retest

reliability of .76. Based on evidence of studies of content, social, criterion, and construct validity, the SSRS is considered a valid instrument for screening and categorizing children in terms of their social skills, problem behaviors, and academic competence (Gresham & Elliot, 1990). When interpreting results, note that an increase on the SSRS-I scale indicates worsening internalizing symptoms.

Prosocial behaviors were measured by the peer-relations subscale of the School Social Behavior Scale–second edition (Merrell, 2002; SSBS-2), as done in previous *Strong Kids* studies (Caldarella et al., 2009; Kramer et al., 2010). This measure is also standardized and norm-referenced, with a reported internal consistency of .96 on the peer-relations subscale, and a test-retest reliability coefficient of .94. Inter-rater reliability for the peer-relations subscale was .82 for elementary-aged students. Taken together, these reliability coefficients are indicative of a highly reliable measure. The SSBS-2 has strong evidence of content, construct, and criterion validity, and this evidence supports the use of the measure of social and anti-social behavior of children and youth in school settings (Merrell, 2002). The SSBS-2 peer relations subscale contains 14 items and measures attributes important in establishing positive relationships and gaining social acceptance from peers. Sample items include "*Offers help to other students when needed," "Is good at initiating or joining conversation with peers,"* and *"Is sensitive to feelings of other students."* Students' observed behaviors were rated by their teacher on a five-point Likert scale ranging from "never" to "frequently." Teachers were instructed to base their ratings on observations of the students' behavior during the previous month. When interpreting scores, note that an increase on the SSBS-2 indicates improved prosocial behaviors.

Treatment Fidelity and Social Validity

To assess whether teachers implemented the *Strong Kids* curriculum with fidelity, research assistants observed 37% of the lessons. For each lesson observed, the researcher completed a treatment fidelity checklist, which was designed to record the specific components of the lessons being taught (see Appendix B). The observer also recorded the amount of time spent on each lesson. Observers did not participate in the lessons and remained unobtrusive, seated at the back of the classroom, as the lessons were presented. To accommodate the observation of lessons, teachers provided the research assistants a schedule of the times they intended to teach the lessons. Research assistants observed lessons without notifying the teacher in advance. It was the intent to observe the lessons unexpectedly so that teachers did not change the way in which they prepared or implemented the lessons, with hopes of thereby yielding a more accurate assessment of treatment fidelity.

Social validity was assessed using a 27-item questionnaire (see Appendix C). This questionnaire asked teachers to respond on a five-point Likert scale, and it has been used in several other studies of *Strong Kids* (Caldarella et al., 2009; Gunter et al., 2012; Kramer et al., 2010). The questions were developed following the guidelines to assess for social validity as proposed by Wolf (1978). These guidelines recommend evaluating whether the goals of the intervention matched the goals of the implementers, whether the procedures of the intervention were acceptable to the implementers, and lastly, whether the implementers were satisfied with the outcomes of the intervention.

Research Design and Analysis

This study used a non-equivalent control group design, which is considered a quasi-experimental design (Gall, Gall, & Borg, 2007). Although the "gold standard" of experimental

research is based upon random assignment of subjects to treatment condition, such random assignment is rarely possible for studies conducted in a school setting where interventions are often delivered class-wide or school-wide, as was the case in the present study (Merrell, 2010). Random assignment of entire schools to treatment or control conditions might be an alternative method to achieve a true experimental design, but such a large-scale study would require extensive resources. Merrell (2010) suggested that in designing research studies, the desire for a tightly-controlled study should be balanced by the need to demonstrate an intervention's feasibility and application in real-world settings. Known as "effectiveness" research, it is conducted in real-world settings and allows a researcher "to see how the intervention performs in the circumstances for which it was actually intended" (Merrell, 2010, p. 63). One of the main focuses of this study was to evaluate the feasibility and social validity of the *Strong Kids* curriculum, particularly when administered school-wide by classroom teachers rather than outside researchers. In this sense it is considered "effectiveness" research. Although the two schools were not randomly selected or assigned to conditions, the control school was selected because it matched the treatment school well on several important demographic variables, such as ethnicity and socioeconomic status.

Quantitative data was analyzed using SPSS version 19.0. Mixed-design analysis of variance (ANOVA) and descriptive statistics (means and standard deviations) were conducted and statistical significance was defined as $p < .05$. Qualitative data was analyzed by reviewing open-ended items on the questionnaire and reviewing the focus group transcript.

Procedures

Approximately one month after the start of school year, each teacher in the treatment school was asked to identify which of their students were most at risk for emotional and

behavioral disorders by completing the first two stages of the Systematic Screening for Behavior Disorders (SSBD; Walker & Severson, 1992) for students in grades 1–6, and the Early Screening Project (ESP; Walker, Severson, & Feil, 1995) for kindergarten students. These screening tools involve teachers ranking students according to the amount of internalizing and externalizing behaviors they exhibit. The teacher then completes the Critical Events Index as well as maladaptive and adaptive behavior scales for the highest-ranking students.

Prior to implementing the *Strong Kids* curriculum, treatment group teachers received brief instruction on social and emotional learning in general, and received approximately one hour of training specifically on the *Strong Kids* curriculum. Teachers were divided into two groups: those teaching *Strong Kids* and those teaching *Strong Start*. An overview of the lesson topics, format, and instructional methods, was provided. Following the training, teachers completed ratings of their students using the 20-item dependent measure. During the same time period, participating teachers at the control school also completed the 20-item measure of their students.

Teachers at the treatment school then commenced teaching the *Strong Kids* lessons on a weekly basis. To allow teachers more flexibility, during the initial training teachers were instructed that the lessons could be divided in half and taught for two shorter periods at separate times during the week. This was presented as an option because previous research suggested that the *Strong Start* lesson length may extend beyond the attention span of young students (Kramer, Caldarella, Christensen, & Shatzer, 2010) and that splitting the lessons into two shorter segments could help reduce this concern. Forty-seven percent (n=8) of the teachers elected to split the lessons and taught them twice weekly.

At the control school, teachers were instructed to conduct their classes as usual, handling any social and emotional instruction as they had previously done. The principal at the control school stated that SEL programs hadn't been uniformly implemented or monitored and that it was unlikely that teachers had spent any time formally providing instruction in social and emotional learning. The extent to which teachers did address social and emotional learning at the control school was not measured by this study.

Thirty-seven percent of the *Strong Kids* lessons were directly observed and a treatment fidelity checklist was completed for these observed lessons. The final lesson was taught the week before students left for winter break. Approximately one month later, booster lessons were taught. The *Strong Start* curriculum included two booster lessons, and the *Strong Kids* curriculum included one booster lesson. Booster lessons functioned primarily as reviews of the previous lessons. The week following the booster lessons, teachers at both treatment and control schools completed the 20-item dependent measure again on each student in their class. An average of 17 weeks elapsed between pretesting and post-testing at both treatment and control schools. Teachers at the treatment school also completed a 27-item social validity questionnaire. Data from both schools was collected at this time and entered into a database.

Qualitative Data Collection

This study also incorporated some qualitative methods to provide further information about teachers' perceptions of the curriculum. There were four open-ended questions included in social validity questionnaire: "*What problems did you have with implementation of the curriculum?*"; *"Would you change the way the lessons are taught? How?"*; *"What changes would you make to the curriculum content?"* and *"What changes did you observe in your students?"* The responses to these open-ended questions were reviewed and several topics were

identified and later addressed in a focus group. Because of the possibility of feeling pressure or influence from school administrators, questionnaires were completed anonymously.

One teacher from each grade was randomly selected to participate in the focus group. This sample was selected in order to provide a variety of perspectives on the program. Teachers participating in the focus group were invited to meet in the school conference room one hour prior to the start of school. A laptop computer recorded audio of the proceedings of the focus group. Two researchers led the discussion, initiating topics of discussion and occasionally asking clarifying questions. Open-ended questions such as "What did you think about the goals of this program?" and "What challenges did you face in teaching the curriculum?" were asked. Typically, one teacher would provide an initial response, with one or more teachers joining in with statements of agreement. To encourage more discussion following a comment, occasionally a moderator would ask if anyone else felt similarly or differently. Although the focus group was semi-structured with preplanned topics covering areas of goals, procedures, and outcomes, several unexpected but relevant topics emerged in the course of discussion; for example, the effect of teaching the curriculum on the teachers' own social and emotional skills (i.e., their ability to internalize the principles they were teaching), and the effect that being observed by researchers (for purposes of treatment fidelity evaluation) had on their teaching of the program.

The focus group lasted approximately one hour. The recording was transcribed and edited for clarity and readability (i.e., stutters, false starts, and "ums" omitted). Because the researcher analyzing the transcripts also conducted the focus group, it was not deemed necessary to provide a more thorough transcription to indicate pauses, laughter, etc. For each topic, it was noted where agreement was found among teachers. Statements which reflected similar opinions were summarized and then further reduced to a single statement for each topic. Differing

opinions were also noted. For those topics of primary interest, a specific quote which best expressed the prevailing view was selected for inclusion in a feedback presentation to the school and for this manuscript.

Results

Independent sample *t*-tests were performed to examine pre-existing group differences between the treatment and control groups. No significant difference was found on the SSRS-I ($t(612) = -.610$, $p = .54$), nor was a significant difference found on the SSBS-2 ($t(612) = 1.2$, $p = .23$). This suggests that the treatment and control groups were sufficiently similar at pretesting. A comparison of at-risk students and non-at-risk students revealed significant pretest differences on the SSBS-2 ($t(346)=6.35$, $p<.001$) and the SSRS-I ($t(346)=-6.40$, $p<.001$), as was expected.

Impact on Study Variables

Effect on prosocial behaviors. A 2-by-2 mixed-design analysis of variance (ANOVA), which compares changes over time according to group membership, was conducted to evaluate the first four research questions. The first research question evaluated whether the universal implementation of the *Strong Kids* curriculum would have a significant effect on teachers' ratings of students' prosocial behaviors, as measured by the SSBS-2, when compared to ratings of students in a control school. Analysis revealed that there was not a significant time-by-group interaction on the SSBS-2 between treatment and control groups ($F(1, 612)=1.31$, $p > .05$; see Table 1). Although there was improvement for the treatment group, a similar improvement was also observed for the control group (see Figure 1). The main effect for time was significant ($F(1,612) = 74.91$, $p < .001$). The main effect for group was not significant ($F(1,612) = 3.29$, $p = .07$).

Table 1

Pretest and posttest means with group x time interactions

	Treatment (n=348)		Control (n=266)		Group x Time interaction	
Measure	*M*	*SD*	*M*	*SD*	*F*	η_p^2
SSBS–2						
Pretest	46.90	13.65	48.21	13.14	1.31	.002
Posttest	49.78	11.86	51.97	12.21		
SSRS–I						
Pretest	2.20	2.60	2.08	2.59	5.24*	.008[c]
Posttest	1.96	2.48	2.23	2.66		

*p<.05, Effect Size: c = small

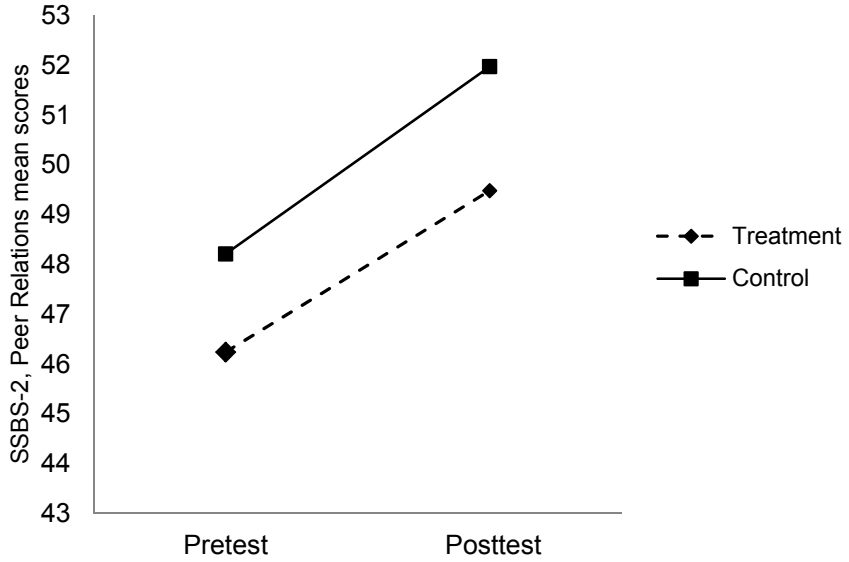


Figure 1. Peer Relations, Treatment vs. Control

Effect on internalizing behaviors. The second research question examined whether *Strong Kids* would have a significant effect on students' internalizing behaviors, as measured by the internalizing subscale of the SSRS, when compared to students in a control school. A significant time-by-group interaction was found between the treatment and control groups ($F(1,612) = 5.24$, $p = .02$; see Table 1 and Figure 2) . This reflected a small difference as indicated by the partial eta squared statistic—an effect size estimate. Cohen's guidelines were used, which suggest that .01 constitutes a small effect, .06 a medium effect, and .14 a large effect (Cohen, 1988). The main effect for time was not significant ($F(1,612) = .23$, $p = .63$), nor was the main effect for group ($F(1,612) = .14$, $p = .71$). These results demonstrate that while the control school experienced an increase in internalizing symptoms, the treatment school had a reduction in internalizing symptoms.

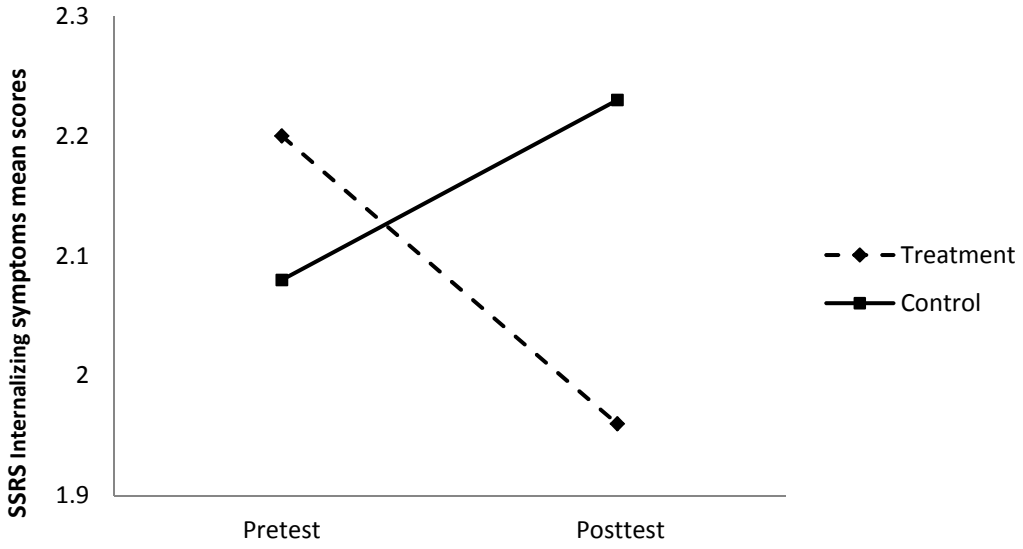


Figure 2. Internalizing symptoms, treatment vs. control

Effect on at-risk students. The third research question evaluated whether treatment group students identified as at-risk by the SSBD and ESP had significantly different outcomes on a measure of prosocial behavior, the SSBS-2) relative to students not identified as "at-risk." On the measure of peer relations (SSBS-2), a significant group-by-time interaction ($F(1, 346) = 13.51$, $p = <.001$) was found. This interaction effect was considered a small effect (see Table 2). There was a significant main effect for time ($F(1,346) = 41.17$, $p < .001$) and the main effect for group was also significant ($F(1,346) = 32.30$, $p<.001$). These results indicate that although both the at-risk and non-at-risk students had increases in prosocial behaviors, the at-risk students' gain was significantly greater (see Figure 3).

Table 2

At-risk vs. non-at-risk students' pretest and posttest means with group x time interactions

	At-risk (n=48)		Non-at-risk (n=300) group x time interaction			
Measure	*M*	*SD*	*M*	*SD*	*F*	η_p^2
SSBS–2						
Pretest	35.90	11.13	48.66	13.20	13.51**	.038[c]
Posttest	43.62	11.24	50.76	11.68		
SSRS–I						
Pretest	4.31	3.28	1.87	2.30	21.93**	.060[b]
Posttest	2.81	3.13	1.83	2.30		

**p<.001, Effect Size: b = medium, c = small

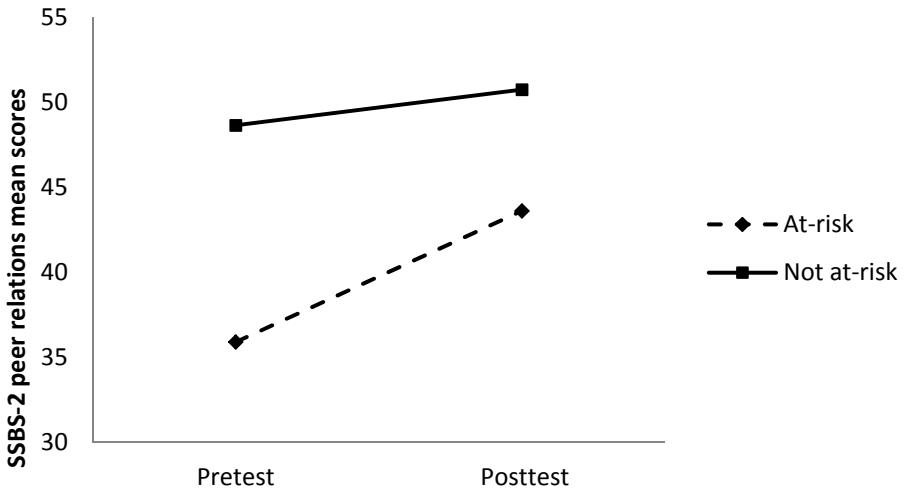


Figure 3. Peer relations, at-risk students vs. non-at-risk student

The fourth research question evaluated whether treatment group students identified as at-risk had significantly different outcomes on a measure of internalizing symptoms, the SSRS-I, relative to non-at-risk students. On the SSRS-I there was a significant interaction between at-risk and non-at-risk students on the measure of internalizing symptoms ($F(1,346)= 21.93$), $p<.001$) of a medium effect size (see Table 2). The main effect for time was significant ($F(1,346) = 24.40$, $p<.001$). The main effect for group was also significant ($F(1,346) = 244.15$, $p<.001$). These results indicate that non-at-risk students experienced only a slight decrease in internalizing symptoms while the at-risk students had a significantly greater reduction of internalizing symptoms (see Figure 4).

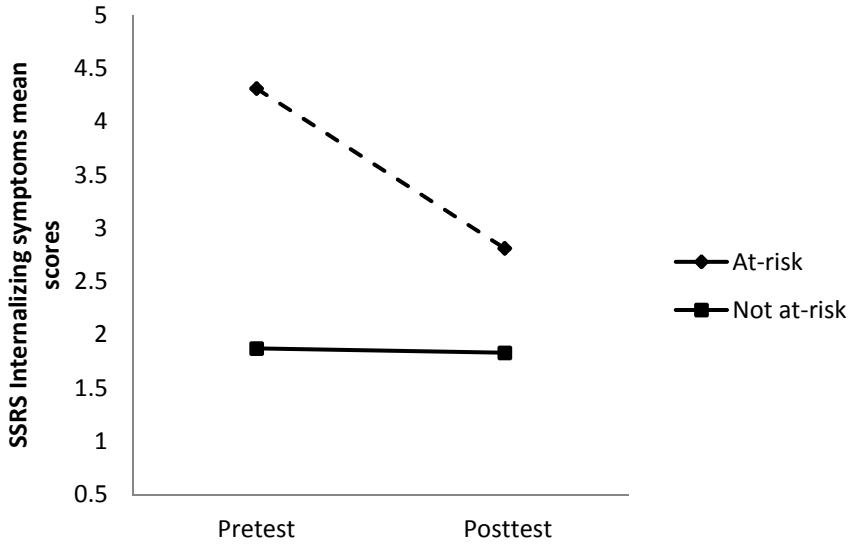


Figure 4. Internalizing symptoms, at-risk students vs. not at risk students

Treatment Fidelity Findings

The fifth research question examined whether elementary school teachers were able to implement the *Strong Kids* curriculum with fidelity, as measured by classroom observations and fidelity checklists. Seventy-six lessons were observed, totaling 37% of all lessons taught. Summaries of the treatment fidelity checklists revealed that 82% of the lesson components were fully completed. Lessons averaged approximately 37 minutes. The lesson components which were most frequently omitted included the reviews of previous lessons, lesson introductions, and conclusions.

Social Validity Findings

The sixth research question examined whether teachers viewed *Strong Kids* as socially valid, as measured by the social validity questionnaire and focus group. Fourteen of the treatment group teachers (82%) completed the social validity survey. On a five-point Likert scale, teachers scored the curriculum's goals an average of 4.17, suggesting agreement with the goals (see Table 3). The procedures and the outcomes of the curriculum received scores of 3.51

and 3.38 respectively, suggesting slight agreement. In response to the statement "It is important that social and emotional skills be taught in school," 86% of the teachers agreed or strongly agreed, while 14% responded neutrally (see Tables 4 and 5). Seventy-nine percent of teachers agreed with the statement "I feel like my students learned important skills from *Strong Kid,"* while 14% felt neutrally about the statement and 7% disagreed. Fifty-seven percent of teachers indicated that they would recommend the *Strong Kids* curriculum to other teachers, while 29% were neutral and 14% would not recommend the curriculum. The statements which received the lowest ratings (both receiving a 2.77) questioned the appropriateness of the length of the lessons and whether the materials provided by the curriculum manual were sufficient to teach the lessons.

Table 3
Acceptability of SEL program goals

Goals	Disagree	Neutral	Agree
Students' social and emotional concerns are great enough to warrant use of a curriculum such as *Strong Kids.*	0%	14%	86%
A student's level of social and emotional competence is important to their academic success.	0%	0%	100%
It is important that social and emotional knowledge and skills are taught in a school setting.	0%	14%	86%
It is feasible for a regular education teacher to teach social and emotional knowledge and skills.	0%	29%	71%
I feel that I have the necessary skills/training to help students with social and emotional difficulties.	7%	29%	64%
I am confident in my ability to implement *Strong Kids.*	0%	14%	86%

Table 4
Acceptability of *Strong Kids* procedures

Procedures	Disagree	Neutral	Agree
I was able to reinforce the skills taught in the *Strong Kids* lessons during other classroom activities.	0%	14%	86%
The time taken to deliver the weekly lessons was acceptable.	7%	43%	50%
The length of the lessons was appropriate for my students.	50%	7%	43%
The materials provided (manual, pictures, handouts) were sufficient to teach the curriculum.	43%	21%	36%
The materials needed for *Strong Kids* were easy to access.	29%	14%	57%
I felt that the curriculum manual alone provided sufficient training to teach the lessons.	36%	0%	64%
The preparation time required to teach the lessons was acceptable.	7%	29%	64%
The teaching procedure of the program was consistent with my regular teaching procedures.	7%	21%	72%
It was reasonable to teach the curriculum as it was designed.	14%	29%	57%
I found that *Strong Kids* was easy to teach.	0%	29%	71%

Table 5

Acceptability of *Strong Kids* outcomes

Outcomes	Disagree	Neutral	Agree
Students demonstrated a transfer of knowledge and skills from the lessons to other school situations.	29%	14%	57%
I was satisfied with the social and emotional skills demonstrated by my students during the course of the curriculum.	29%	21%	50%
Strong Kids was a good way to help prevent students' social and emotional problems.	21%	50%	29%
I feel my students learned important skills from *Strong Kids.*	7%	14%	79%
I feel my students use the skills learned from *Strong Kids.*	21%	29%	50%
My students liked *Strong Kids*	21%	50%	29%
Students were interested in or excited for the lessons and showed active participation in them.	36%	21%	43%
Most teachers would find *Strong Kids* suitable for improving social and emotional competence.	14%	21%	65%
I would recommend the use of *Strong Kids* to other teachers.	14%	29%	57%
I would like to implement *Strong Kids* again.	14%	29%	57%
I enjoyed teaching *Strong Kids*.	29%	14%	57%

Several common themes emerged in response to the open-ended questions on the social validity questionnaire, and in the focus group. Because the Strong Kids curriculum and the Strong Start curriculum differed to some extent, direct quotes from teachers regarding the curricula are indicated as being from a Strong Start or Strong Kids teacher. Many teachers mentioned that the curriculum provided a common vocabulary between teacher and student and cited this as a primary strength of the program. This idea was further explained during the focus group by a teacher who stated, "I felt like *Strong Kids* gave us common vocabulary so if a situation arose we could use the vocabulary and talk about it, and be able to discuss it using something they understood" (*Strong Kids* teacher). Another teacher, speaking of a female student, stated, "She, at one point, came up to me and asked me for help when she was having a problem. I think it gave her an avenue to seek help, and it really helped her. And she was an internalizer" (*Strong Start* teacher). Some teachers mentioned that having the curriculum taught school-wide was important because expectations were set school-wide. Students could recognize that the principles taught were important to all teachers and that the vocabulary would be familiar to students not just in one class but all classes, and for subsequent years as well. Some teachers mentioned that the discussion aspect of the program was a strong point and expressed surprise at the extent to which the students opened up and engaged in discussion. Another teacher expressed what she saw as a major strength of the program (also mentioned by several other teachers) stating,

> It's very rewarding as a teacher because we spend a lot of time teaching the students academics, but we know for our students, at this school, the most helpful thing for them is emotional help. We can help all the kids academically and they may still not succeed

> but when you help them emotionally you're empowering them for the rest of their lives. And seeing them use the things we have taught is very rewarding (*Strong Start* teacher).

Most teachers noted changes in at least some students, primarily in their ability to deal with problems and conflicts on their own. One unexpected finding that came up during the focus group was that teachers expressed being able to learn and benefit from the lessons themselves. One teacher remarked,

> I thought, I am not the kind of person who wants to talk about feelings in my classroom. I went into this with that attitude—not the best attitude, obviously, but as we discussed and we talked about the principles found in *Strong Kids* I actually found myself using more of those techniques than a lot of the kids did . . . I think every teacher felt this way that, maybe not every lesson, but there was at least one that hit them, that applied and took and used. I did a couple of times (*Strong Kids* teacher).

Teachers were fairly consistent in their criticisms of the program as well. Some teachers of younger students felt that the lessons were too long for the students' attention span, and at times lessons became repetitive, and made comments such as "I thought the attention span was the hardest thing," and "Time was too long for my kindergarten kids" (*Strong Start* teachers) Teachers also recommended that more interactive activities should be incorporated into the lessons and that curriculum would benefit from more varied instructional materials such as video clips and improved visual aids (*Strong Start* teachers). When asked how the curriculum might be improved teachers suggested the following: "Add more realistic examples and include more activities that let students realistically practice the skill," and "It would have been nice if a video clip was included that could show some situations—younger students often need clear examples" (*Strong Start* teachers).

Discussion

The purpose of this study was to evaluate the *Strong Kids* curriculum, administered school-wide as a universal intervention in a Title I elementary school. To date, this is the largest study of *Strong Kids,* and the first to evaluate a school-wide implementation of the curriculum. This study investigated the effect of *Strong Kids* on students' prosocial and internalizing behaviors, as rated by their teachers. Additionally, this study examined whether the curriculum had differing effects on students who had been identified as at-risk versus non-at-risk. This study also evaluated whether teachers were able to implement the curriculum with integrity and if teachers viewed the curriculum as socially valid.

Summary and Interpretation of Findings

Overall, the results of this study suggest that *Strong Kids* contributed to a significant reduction in internalizing behaviors and the prevention of worsening internalizing symptoms when compared to outcomes of students at a control school who did not receive the program. Among at-risk students, reductions in internalizing behaviors were seen and significant increases in prosocial behaviors were also reported. It appears that the curriculum has a preventative effect with non-at-risk students and a treatment effect with at-risk students. Observations of the implementation of the curriculum revealed that teachers were able to implement the curriculum with integrity, although the lessons for K–2 students were somewhat more difficult to implement with integrity. Generally, teachers viewed the curriculum's goals as valuable, and they had moderately favorable opinions of the curriculum's procedures and outcomes.

Effect on prosocial behaviors. This study examined whether peer-related prosocial behaviors were likely to change as a result of participating in the *Strong Kids* curriculum. Results from this study indicated that although teacher-ratings of prosocial behaviors improved

for students receiving the curriculum, ratings also increased to a similar degree for students at the control school. The small increase in prosocial behaviors was modest in comparison to larger gains that were seen in two previous studies of the curriculum (Caldarella et al., 2009, Kramer et al., 2009). It could be that the greater support and feedback given to teachers in these previous studies enhanced the implementation of the curriculum, particularly the recommendation that prosocial behaviors be reinforced throughout the day. Also, considering that a major focus of the curriculum was to address the needs of internalizing students, it is not surprising that greater gains were seen in reduction in internalizing symptoms than in increases in prosocial behaviors.

Effect on internalizing behaviors. Post-testing results revealed a slight decrease in internalizing behaviors among the treatment group, while there was an increase of internalizing behaviors among the control group. This suggests the influence of a preventive effect. As Harlacher (2010) noted, the curriculum may equip students with coping and problem solving skills and help them gain the ability to build the social supports necessary to protect them from the stresses they normally experience.

The relatively small reduction in internalizing symptoms among treatment group students was not entirely surprising. Students in this study represented a non-clinical (universal) population. Because the large majority of students were rated by their teachers as having very few or no internalizing symptoms at pretesting, large reductions were not possible for the majority of students. Although the reduction of internalizing symptoms was relatively small, it should be noted that there was actually a slight increase in internalizing behaviors among students at the control school. This speaks to role the *Strong Kids* curriculum may play in preventing the worsening of internalizing symptoms.

The small decrease in internalizing symptoms among the treatment group was consistent with previous studies of the curriculum using the same measure (Kramer et al., 2009), as was the increase in internalizing symptoms for control students (Caldarella et al., 2009). Several other studies of *Strong Kids* using self-report measures also reported decreases in internalizing symptoms (Merrell et al., 2006; Tran, 2007). However, not all studies have found this decrease. A smaller scale study involving 21 students in special education classrooms did not find significant reductions in internalizing behaviors (Nakayama, 2008). A study conducted by Gueldner and Merrell (2011) also did not find a reduction in internalizing behaviors, which the researchers attributed to low baseline rates of internalizing symptoms.

Effect on at-risk students. Another purpose of the study was to examine how at-risk students, i.e. those rated as having higher levels internalizing and externalizing behaviors prior to the start of the curriculum, would respond to the *Strong Kids* curriculum in comparison to non-at-risk students. The results demonstrated that teachers viewed at-risk students as having improved significantly more than non-at-risk students both on internalizing symptoms and prosocial behaviors. The finding was also similar to previous studies (Caldarella et al., 2009, Kramer et al., 2009). At post-testing, on the measure of internalizing symptoms, at-risk students neared the level of non-at-risk students in terms of their internalizing behaviors. It appears that for these students, the curriculum had therapeutic effects (serving as an intervention) and not just potential preventive effects.

Although the curriculum appeared to have greater benefits for those students displaying greater risk, it should be noted that Merrell and colleagues (2007) have suggested that the curriculum is not intended as a sole intervention for students experiencing severe distress, but rather should be considered one component of a comprehensive treatment approach.

Treatment fidelity findings. This study also examined whether the curriculum could be implemented with integrity. We reasoned that assessing treatment fidelity would give an indication of the feasibility of the program. If teachers are not able to implement the curriculum in a real-world setting and if the procedures are not acceptable, then the curriculum likely will only have limited utility. Strong treatment fidelity has been one of the most consistently reported findings in previous studies of the *Strong Kids* curriculum (Merrell, 2010). However, previous studies were of a much smaller scale, and often the participating teachers received moderate to extensive training and support throughout the study. Because one of the purposes of this study was to evaluate whether teachers could implement the curriculum with very little training or support (as would likely be the case in real-world settings), teachers were only given a brief, one-hour introduction to the curriculum. We found that teachers were able to implement the study with adequate integrity, as recorded by research assistants who observed one third of all lessons and completed checklists measuring treatment fidelity.

The sufficiently high treatment fidelity results are likely attributable to several features of the curriculum. The curriculum is semi-scripted, and each lesson follows a similar outlined format. Perhaps because of this very structured format teachers were able to complete the main points of each lesson. In the focus group, several teachers stated that being observed on random occasions led them to follow the curriculum very closely. This phenomenon of being observed may have increased the overall treatment integrity as well.

Although teachers did demonstrate adequate fulfillment of the main components of each lesson, other important variables of the program were not evaluated. For example, the authors of the curriculum recommend that teachers find opportunities to pre-correct students and reinforce the lesson principles throughout the day (Merrell et al., 2007). This is intended to help the skills

and principles taught in each lesson to generalize to other times and settings. Because of limited resources, the time-intensive process of observing and recording instances of pre-correction and reinforcement outside of the lesson instruction was not included in this study. Another component of the program's implementation that was not evaluated was the extent to which students were assigned and completed homework from the lessons and took home lesson bulletins to their parents to review with them. It is thought that by having students work on lessons outside of class (homework) and by having parents aware of the lesson material and given opportunity to reinforce the principles, the skills will likewise generalize more easily.

The results of the focus group indicated that those teachers who implemented the *Strong Start* (K–2nd grade) component of the *Strong Kids* series reported more difficulty in implementing the curriculum as it was designed. They responded that shortened lessons and additional visual aids to supplement the lessons would benefit the program. These teachers felt that because of their younger students' shorter attention spans, they had to modify the lessons somewhat. Although not an original purpose of the study, we calculated treatment fidelity rates for the *Strong Start K–2* and the *Strong Kids 3–5* curricula separately, as they utilize slightly different teaching methods and activities. A statistically significant difference was found between teachers using the *Strong Start* curriculum (implementing 72% of the lesson components fully) and teachers implementing the *Strong Kids 3–5* curriculum (implementing 92% of the components fully.

Social validity findings. Results of the social validity surveys and focus group revealed that teachers were very supportive of the goals of the *Strong Kids* curriculum. The majority of teachers felt that students' social and emotional concerns were great enough to warrant formal attention in the schools via a curriculum such as *Strong Kids.* This was consistent with survey

research which suggested that nearly all teachers feel that social and emotional learning is important for students, for both academic and life purposes (Buchanan et al., 2009). However, teachers were more varied in their views regarding the acceptability and feasibility of implementing the *Strong Kids* curriculum. Although they generally held a moderately favorable view of the procedures used to teach the curriculum, many teachers felt that the lessons were too long for the attention span of their students. This was particularly true of teachers of the younger grades, consistent with previous research on the *Strong Start* component of the *Strong Kids* series (Kramer et al., 2009). Some teachers felt that additional materials, such as improved visual aids or more interactive activities, would have benefited the program. With regards to the student outcomes, most teachers felt that *Strong Kids* was beneficial to their students' social and emotional well-being. Teachers responded that their students learned important skills from the curriculum, but teachers were less certain that their students actually applied the skills which they were taught. The majority of teachers indicated they would like to teach the curriculum again. Overall, the results from the survey and focus group suggest that teachers held favorable views of the curriculum but were not entirely satisfied with the procedures and outcomes, feeling that it took too long to teach, and that it perhaps needed more interactive activities and a better use of technology and visual aids. However, they reported feeling that the principles taught were important to their students' emotional and academic success.

In a large survey of teachers, Buchanan et al. (2009) found that the majority of SEL programs were being implemented by teachers, rather than school counselors or psychologists. In the 2011 meta-analysis of SEL programs it was found that having teachers implement the programs resulted in the greatest positive effects (Durlak et al., 2011). These demonstrate the importance of utilizing programs that teachers find acceptable and feasible to implement.

Limitations and Recommendations for Future Research

A potential limitation of this study was that random selection and assignment was not feasible. Rather, this study utilized a non-equivalent control group design. Because random assignment to condition was not feasible in the school setting it was important that the treatment and control schools were similar on several variables. Both schools were very similar demographically, and no significant differences were found between groups at pretesting on measures of prosocial behaviors and internalizing behaviors.

One weakness of the study was the reliance on only one source of information—teacher ratings—to measure changes in student behaviors. One potential problem with this methodology is that teachers may have been influenced by expectancy effects; that is, because they were aware of the purpose of the curriculum, they may have rated their students in a socially desirable way (Gall et al., 2007). Additionally, because teachers taught the curriculum themselves, they may have been influenced to show improvement in their students as this could be perceived as a reflection on their teaching effectiveness. That being said, the teachers did not have access to pretest results at posttest, and it is questionable whether they would remember how they scored their students four months previously. In addition, improvements were not consistent across measures (with more favorable results seen on SSRS-I) which is an argument against teachers' ratings reflecting the effects of social desirability.

Ideally, additional sources of outcome data would have been used in this study. For example, having parents rate their child's behaviors and symptoms could have provided an additional source of information and better verified whether the skills and knowledge generalized to settings outside of school. Student self-reports could have also been used for older students, although self-reports for young students (younger than age nine) are problematic as young children often lack the insight necessary to make reflections on their own behavior and internal

functioning (Merrell, 2008a). Additional sources of information that might be used to evaluate the effects of a social and emotional learning curriculum could also include office disciplinary referrals and students' grades and standardized test scores.

In a meta-analysis of SEL programs, Durlak et al. (2011) identified six measurable outcomes of SEL. In our study we only evaluated two of these six: symptom distress and positive social behaviors. A more direct measure of social and emotional resilience, such as the strength-based assessment Social and Emotional Assets and Resiliency Scales (SEARS; Merrell, 2008b), might better measure changes in social and emotional competence and resilience.

Although the *Strong Kids* curriculum aims to foster resilience within the individual student, it may be of benefit within the school and community domains as well. A school in which SEL principles are taught school-wide, in which teachers and administrators are consistent with their expectations, would be more likely to be nurturing, responsive, and predictable—key school features identified by Werner for fostering resilience among student. As this was a school-wide intervention, an evaluation of the "school climate," although difficult to measure, would be helpful as this construct may be important to the success of SEL programs (Stoiber, 2011). Additionally, as Werner noted, close bonds with important caregivers or teachers are commonly found among resilient youth. It could be that the open communication between student and teacher that *Strong Kids* helps facilitate could help develop the close bonds and mentor-like relationships that Werner identified among resilient children.
Therefore a measure of student-teacher, or perhaps parent-child relationship quality, or even student's attachment to school, might be incorporated into a study of the effects of SEL, as was done in the Gunter et al. (2012) article.

This was a fairly short-term study, and it raises the question of what kind of outcomes would be seen if the students continued to receive SEL instruction for multiple years and were followed up with much later. Would the gains that were achieved be maintained at long-term follow-ups? Several studies have found maintenance at short-term follow-up (Harlacher & Merrell, 2009; Marchant et al., 2010); however, with a prevention-oriented curriculum like *Strong Kids*, designed to span several school grades, a multi-year evaluation may provide a better indication of its influence.

Conclusion

In summary, although the benefits of SEL instruction have been widely documented by meta-analyses, such as that performed by Durlak et al. (2011), the adoption and successful implementation of SEL curriculum remains less common. It is unlikely that an intervention will be acceptable unless it can be effective in real-world conditions. The purpose of this study was to evaluate an SEL curriculum that was designed to be feasible, implementable by classroom teachers, and appropriate for all students at the universal level. The results suggested that the teachers were able to implement the curriculum with fidelity, and that some positive effects on internalizing symptoms and prosocial behaviors were found, particularly for students identified as at-risk. Future studies could benefit from comprehensive measures of social and emotional competence and resilience, including multiple sources of information and measures of effect on academic performance as well.

As more educators and policymakers become aware of the importance of SEL, both for students' mental health and their academic achievement, it is likely that SEL instruction will begin to be incorporated into state learning standards, such as has been done in Illinois (Durlak et

al., 2011). Identifying evidence-based SEL programs that can be effectively implemented will continue to be an important area of research.

References

Asher, S. R., & Coie, J. D. (1990). *Peer rejection in childhood*. New York, NY: Cambridge University Press.

Bayer, J. K., Rapee, R. M., Hiscock, H., Ukoumunne, O. C., Mihalopoulos, C., & Wake, M. (2011). Translational research to prevent internalizing problems early in childhood. *Depression and Anxiety, 28*(1), 50-57.

Buchanan, R., Gueldner, B. A., Tran, O. K., & Merrell, K. W. (2009). Social and emotional learning in classrooms: A survey of teachers' knowledge, perceptions, and practices. *Journal of Applied School Psychology*, *25*(2), 187–203.

Caldarella, P., Christensen, L., Kramer, T. J., & Kronmiller, K. (2009). The effects of *Strong Start* on second grade students' emotional and social competence. *Early Childhood Education Journal, 37*, 51–56.

Collaborative for Academic, Social, and Emotional Learning (CASEL). (2002). *Guidelines for social and emotional learning: High quality programs for school and life success.* Retrieved August 29, 2008, from http://www.casel.org/downloads/GuidelinesAug02.pdf

Castro Olivo, S. (2006). The effects of a culturally-adapted social-emotional learning curriculum on social-emotional and academic outcomes of Latino immigrant high school students. Unpublished doctoral dissertation, University of Oregon, Eugene.

Cowen, E. L., Wyman, P. A., Work, W. C., & Parker, G. R. (1990). The Rochester child resilience project: Overview and summary of first year findings. *Development and Psychopathology, 2*(2), 193–212.

Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin, 115*(1), 74–101.

Crone, D. A., Horner, R. H., & Hawken, L. S. (2004). *Responding to problem behavior in schools: The behavior education program*. New York, NY: Guilford Press.

Davis, Andrew S. (2006). The neuropsychological basis of childhood psychopathology. *Psychology in the Schools, 43*(4), 503–512.

Denham, S. A., Blair, K. A., DeMulder, E., Levitas, J., Sawyer, K., Auerbach-Major, S., & Queenan, P. (2003). Preschool emotional competence: Pathway to social competence. *Child Development*, *74*(1), 238-256. doi:10.1111/1467-8624.00533

Doll, B., & Lyon, M. A. (1998). Risk and resilience: Implications for the delivery of educational and mental health services in schools. *School Psychology Review, 27*(3), 348–363.

Domitrovich, C. E., & Greenberg, M. T. (2000). The study of implementation: Current findings from effective programs that prevent mental disorders in school-aged children. *Journal of Educational & Psychological Consultation, 11*(2), 193–221.

Durlak, J. A., & Wells, A. M. (1997). Primary prevention mental health programs for children and adolescents: A meta-analytic review. *American Journal of Community Psychology, 25*(2), 115–152.

Durlak, J. A., & Wells, A. M. (1998). Evaluation of indicated preventive intervention (secondary prevention) mental health programs for children and adolescents. *American Journal of Community Psychology*, 26(5), 775–802.

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, *82*(1), 405–432.

Elias, M. J., Zins, J. E., Weissberg, R. P., Frey, K. S., Greenberg, M. T., & Haynes, N. M. (1997). *Promoting social and emotional learning: Guidelines for educators*. Alexandria, VA: Association for Supervision and Curriculum Development

Elias, M. J., Arnold, H., & Hussey, C. S. (2003).*EQ + IQ = Best leadership practices for caring and successful schools*. Thousand Oaks, CA, US: Corwin Press.

Feuerborn, L. L. (2004). *Promoting emotional resiliency through instruction: The effects of a classroom-based prevention program*. US: ProQuest Information & Learning.

Gall, M. D., Gall, J. P., & Borg, W. R. (2007). E*ducational research: An introduction* (8th ed.). Boston, MA: Pearson/Allyn and Bacon.

Gillham, J. E., Reivich, K. J., Freres, D. R., Lascher, M., Litzinger, S., Shatté, A., & Seligman, M. P. (2006). School-based prevention of depression and anxiety symptoms in early adolescence: A pilot of a parent intervention component. *School Psychology Quarterly*, *21*(3), 323-348.

Graczyk, P. A., Greenberg, M. T., Elias, M. J. , & Zins, J. E. (2000). The role of the collaborative to advance social and emotional learning (CASEL) in supporting the implementation of quality school-based prevention programs. *Journal of Educational and Psychological Consultation, 11*(1), 3–6.

Greenberg, M. T., Domitrovich, C., & Bumbarger, B. (2001). The prevention of mental disorders in school-aged children: Current state of the field. *Prevention & Treatment, 4*(1), 1a.

Greenberg, M. T., Weissberg, R. P., O'Brien, M., Zins, J. E., Fredericks, L., Resnik, H., & Elias, M. J. (2003). Enhancing school-based prevention and youth development through coordinated social, emotional, and academic learning. *American Psychologist*, *58*(6-7), 466-474.

Gresham, F. M. (1989). Assessment of treatment integrity in school consultation and pre-referral intervention. *School Psychology Review, 18*(1), 37–50.

Gresham, F. M. (2009). Evolution of the Treatment Integrity Concept: Current Status and Future Directions. *School Psychology Review*,*38*(4), 533-540.

Gresham, F. M., & Elliott, S.N. (1990). Social Skills Rating System manual. Circle Pines, MN: American Guidance Service.

Gresham, F. M., Sugai, G., & Horner, R. H. (2001). Interpreting outcomes of social skills training for students with high-incidence disabilities. *Exceptional Children, 67*(3), 331.

Gueldner, B. A. (2008). *The effectiveness of a social-emotional learning program with middle school students in a general education setting and the impact of consultation support using performance feedback*. US: ProQuest Information & Learning.

Gueldner, B., & Merrell, K. (2011). Evaluation of a social-emotional learning program in conjunction with the exploratory application of performance feedback incorporating motivational interviewing techniques. *Journal of Educational & Psychological Consultation, 21*(1), 1–27.

Gunter, L.,Caldarella, P., Korth, B. B., &Young, K. R. (2012). Promoting social and emotional learning in preschool students: A study of Strong Start Pre-K. *Early Childhood Education Journal,40*(3),151–159.

Harlacher, J. E., &Merrell, K. W. (2010). Social and emotional learning as a universal level of student support: Evaluating the follow-up effect of Strong Kids on social and emotional outcomes. *Journal of Applied School Psychology*, *26*(3), 212–229.

Hirschfeld, R. M. A., Keller, M. B., Panico, S., & Arons, B. S. (1997). The national depressive and manic-depressive association consensus statement on the undertreatment of depression. *JAMA: Journal of the American Medical Association, 277*(4), 333–340.

Hoagwood, K., & Johnson, J. (2003). School psychology: A public health framework. From evidence-based practices to evidence-based policies. *Journal of School Psychology, 41*, 3–21.

Isava, D. M. (2006). An investigation of the impact of a social-emotional learning curriculum on problem symptoms and knowledge gains among adolescents in a residential treatment center. Unpublished doctoral dissertation, University of Oregon, Eugene.

Izard, C.E., Fine, S.E., Mostow, A.J., Trentacosta, C.J., & Campbell, J. (2002). Emotion processes in normal and abnormal development and preventative intervention. *Development and Psychopathology, 14,* 761–787.

Joseph, G. E., & Strain, P. S. (2003). Comprehensive evidence-based social-emotional curricula for young children: An analysis of efficacious adoption potential. *Topics in Early Childhood Special Education, 23*(2), 65–76.

Kam, C., Greenberg, M. T., & Walls, C. T. (2003). Examining the role of implementation quality in school-based prevention using the PATHS curriculum. *Prevention Science, 4*(1), 55–63.

Kramer, T. J., Caldarella, P., Christensen, L., & Shatzer, R. H. (2010). Social-emotional learning in kindergarten classrooms: Evaluation of the *Strong Start* curriculum. *Early Childhood Education Journal, 37*(4), 303–398.

Lane, K. L., & Beebe-Frankenberger, M. (2004). *School based interventions: The tools you need to succeed.* Boston, MA: Pearson Education Inc.

Levitt,V. H. (2008). Promoting social-emotional competency through quality teaching practices: The impact of consultation on a multidimensional treatment integrity model of the *Strong Kids* program. Unpublished doctoral dissertation, University of Oregon, Eugene.

Luthar, S. S., & Zigler, E. (1991). Vulnerability and competence: A review of research on resilience in childhood. *American Journal of Orthopsychiatry, 61*(1), 6–22.

Maguin, E., & Loeber, R. (1996). How well do ratings of academic performance by mothers and their sons correspond to grades, achievement test scores, and teachers' ratings? *Journal of Behavioral Education, 6*(4), 405–425.

Marchant, M., Brown, M., Caldarella, P., & Young. E. (2010). Effects of Strong Kids curriculum on students at risk for internalizing disorders: A pilot study. Journal of Empirically Based Practices in Schools, 11 (2), 123-143.

Masten, A. S., Best, K. M., & Garmezy, N. (1990). Resilience and development: Contributions from the study of children who overcome adversity. *Development and Psychopathology*,*2*(4), 425–444.

Masten, A. S., & Coatsworth, J. (1998). The development of competence in favorable and unfavorable environments: Lessons from research on successful children. *American Psychologist*, *53*(2), 205–220.

McLeod, J. D., & Kaiser, K. (2004). Childhood emotional and behavioral problems and educational attainment. *American Sociological Review, 69*(5), 636–658.

Merrell, K. W. (2002). *School Social Behavior Scales, second edition. B*altimore: Paul H Brookes Publishing.

Merrell, K. W. (2008a). *Behavioral, social, and emotional assessment of children and adolescents* (3rd ed.). New York: Erlbaum/Taylor & Francis.

Merrell, K. W. (2008b). Social and emotional assets and resiliency scales (SEARS). Eugene: School psychology program, University of Oregon. Available at http://strongkids.uoregon.edu/SEARS.html.

Merrell, K.W. (2010). Linking prevention science and social and emotional learning: The Oregon Resiliency Project. *Psychology in the Schools, 47*(1), 55–70.

Merrell, K.W., Carrizales, D., Feuerborn, L., Gueldner, B. A., & Tran, O. K. (2007). Strong Kids—*Grades 3–5: A social and emotional learning curriculum.* Baltimore: Paul H. Brooks Publishing.

Merrell K. W., Gueldner B. A., & Tran O. K. (2008). Social and emotional learning: A school-wide approach to intervention for socialization, friendship problems and more. In E. J. Doll& J. A. Cummings (Eds.), *Transforming school mental health services: Population-based approaches to promoting the competency and wellness of children* (pp. 165–185). Thousand, Oaks, CA: Corwin Press/National Association of School Psychologists.

Merrell, K. W., &Gimpel, G. A. (1998). S*ocial skills of children and adolescents: Conceptualization, assessment, treatment*. Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Merrell, K. W., Parisi, D. M., & Whitcomb, S. A. (2007). Strong Start *grades K–2: A social and emotional learning curriculum*. Baltimore, MD: Paul H Brookes Publishing.

Metlife. (2002). *The Metlife survey of the American teacher 2002—Student life: School, home, and community.* New York: Author:

Nakayama, N. J. (2008). An investigation of the impact of the *Strong Kids* curriculum on social-emotional knowledge and symptoms of elementary aged students in a self-contained special education setting. Unpublished doctoral dissertation, University of Oregon, Eugene.

Offord, D. R. (1996). The state of prevention of early intervention. In R. D. Peters& R. J. McMahon (Eds.), *Preventing childhood disorders, substance abuse, and delinquency* (pp. 329–344). Thousand Oaks, CA: Sage Publications, Inc.

Oswald, D. P., &Mazefsky, C. A. (2006). Empirically supported psychotherapy interventions for internalizing disorders. *Psychology in the Schools, 43*(4), 439–449.

Payton, J. W., Wardlaw, D. M., Graczyk, P. A., Bloodworth, M. R., Tompsett, C. J., & Weissberg, R. P. (2000). Social and emotional learning: A framework for promoting mental health and reducing risk behavior in children and youth. *Journal of School Health, 70*(5), 179.

Payton, J., Weissberg, R.P., Durlak, J. A., Dymnicki, A. B., Taylor, R.D., Schellinger, K. B., & Pachan, M. (2008). The positive impact of social and emotional learning for kindergarten to eighth-grade students: Findings from three scientific reviews. Chicago, IL: Collaborative for Academic, Social, and Emotional Learning.

Quinn, M. M., Osher, D., Hoffman, C.C., Hanley, T. V. (1998) *Safe, Drug-Free, and Effective Schools for ALL Students: What Works!* Washington, DC: Center for Effective Collaboration and Practice, American Institutes for Research.

Rones, M., & Hoagwood, K. (2000). School-based mental health services: A research review. *Clinical Child and Family Psychology Review, 3*(4), 223–241.

Rudolph, K. D., & Asher, S. R. (2000). Adaptation and maladaptation in the peer system: Developmental processes and outcomes. In A. J. Sameroff, M. Lewis,& S. M. Miller (Eds.),

Handbook of developmental psychopathology (2nd ed.) (pp. 157–175). Dordrecht, Netherlands: Kluwer Academic Publishers.

Sanders, D.E., Merrell, K.W. & Cobb, H.C. (1999). Internalizing symptoms and affect of children of children with emotional and behavioral disorders: A comparative study with an urban African American sample. *Psychology in the Schools, 36,* 187–197.

Schoenwald, S. K., & Hoagwood, K. (2001). Effectiveness, transportability, and dissemination of interventions: What matters when? *Psychiatric Services, 52*(9), 1190–1197.

Search-Institute. Risk and Protective Factors. Retrieved January 30, 2013, from http://www.search-institute.org/system/files/WANK-Sample-pages.pdf.

Seifer, R., Gouley, K., Miller, A. L., & Zakriski, A. (2004). Implementation of the PATHS curriculum in an urban elementary school. *Early Education and Development, 15*(4), 471–485.

Spence, S. H., Sheffield, J. K., & Donovan, C. L. (2003). Preventing adolescent depression: An evaluation of the problem solving for life program. *Journal of Consulting and Clinical Psychology, 71*(1), 3–13.

Sprague, J. R., & Walker, H. (2000).Early identification and intervention for youth with antisocial and violent behavior. *Exceptional Children, 66*(3), 367–379.

Sternberg, R. (1997). Fads in psychology: What we can do. *APA Monitor,28*, 19.

Stoiber, K. C. (2011) Translating knowledge of social-emotional learning and evidence-based practice into responsive school innovations. *Journal of Educational and Psychological Consultation, 21*, 46–55.

Sugai, G., & Horner, R. (2002). The evolution of discipline practices: School-wide positive behavior supports. *Child & Family Behavior Therapy, 24*(1), 23–50.

Tran, O. K. (2007). Promoting social and emotional learning in schools: An investigation of massed versus distributed practice schedules and social validity of the *Strong Kids* curriculum in late elementary aged students. Unpublished doctoral dissertation, University of Oregon, Eugene.

Trentacosta, C. J., & Izard, C. E. (2007). Kindergarten children's emotion competence as a predictor of their academic competence in first grade. *Emotion, 7*(1), 77–88.

US Department of Education, Office of Special Education (OSEP) Center on Positive Behavioral Interventions and Supports.(2004). *School-wide PBS*. Retrieved from http://www.pbis.org.

US Department of Health and Human Services. (2001). *Trends in the well-being of America's children and youth.* Washington, DC: US Government Printing Office.

Walker, H. M. (2004). Commentary: Use of evidence-based intervention in schools: Where we've been, where we are, and where we need to go. *School Psychology Review, 33*(3), 398–407.

Walker, H. M.,& Gresham, F. M. (2003). School-related behavior disorders. In W. M. Reynolds& G. E. Miller (Eds.), *Handbook of psychology: Educational psychology, vol. 7* (pp. 511–530). Hoboken, NJ: John Wiley & Sons Inc.

Walker, H. M., Ramsey, E., & Gresham, F. M. (2004) *Antisocial behavior in schools: Evidence-based practices* (2nd ed.). Florence, KY: Wadsworth/Thompson Learning.

Walker, H. M., & Severson, H. H. (1992). S*ystematic Screening for Behavior Disorders (SSBD): User's guide and administration manual.* Longmont, CO: Sopris West.

Walker, H. M., Severson, H. H., & Feil, E. G. (1995). *Early screening project: A proven child-find process.* Longmont, CO: Sopris West.

Weissberg, R. P., Resnik, H., Payton, J., & O'Brien, M. U. (2003). Evaluating social and emotional learning programs. *Educational Leadership, 60*(6), 46.

Werner, E. E. (1995). Resilience in development. C*urrent Directions in Psychological Science, 4,* 81–85.

Werner, E. E. (2000). Protective factors and individual resilience. In J. Shonkoff & S. Meisels (Eds.), *Handbook of early childhood intervention* (2nd ed., pp. 115–132). New York: Cambridge University Press.

Wolin, S. J., & Wolin S. (1993). *The resilient self: How survivors of troubled families rise above adversity.* New York: Villard.

Wolf, M. M. (1978). Social validity: The case for subjective measurement for subjective measurement or how applied behavior analysis is finding its heart. J*ournal of Applied Behavior Analysis, 11,* 203–214.

Yeaton, W. H., & Sechrest, L. (1981). Critical dimensions in the choice and maintenance of successful treatments: Strength, integrity, and effectiveness. *Journal of Consulting and Clinical Psychology, 49*(2), 156–167.

Zins, J. E., Bloodworth, M. R., Weissberg, R. P., & Walberg, H. H. (2004). The scientific base linking social and emotional learning to school success. *Building academic success on social and emotional learning: What does the research say?* (pp.3–22). New York: Teachers College Press.

Zolkoski, S. M., & Bullock, L. M. (2012). Resilience in children and youth: A review. *Children and Youth Services Review*.

Appendix A: SSBS-2 Peer Relations Subscale and SSRS Internalizing Subscale

Strong Kids Teacher Rating Form

Identifying Information
Name of student:_____
School: _____
Grade _____
Age: _____ years old
Sex: Male☐Female☐
Name of person completing form:_____
Date form completed:_____

Directions
After you have finished the *Identifying Information* section, please rate this student's behavior using all of the items on this rating form. Ratings should be based on your observations of this student's behavior **during the past three months**. The rating points after each item are based on the following format:

Never If the student does not exhibit a particular behavior, or if you have not had an opportunity to observe a particular behavior, circle 1, which indicates *Never*.

Frequently If the student often exhibits a particular behavior, circle 5, which indicates *Frequently*.

Sometimes Circle the numbers 2, 3, or 4, (which indicates *Sometimes*) if the student exhibits the behavior somewhere in between the two extreme rating points, based on your judgment of how frequently it occurs. The rating points after each item appear in the following format:

NEVER		SOMETIMES		FREQUENTLY
1	2	3	4	5

Please complete all items, and do not circle between numbers. If you have any additional comments about the student, write them on the blank side of the back page.

SSBS

1. Offers help to other students when needed	NEVER		SOMETIMES		FREQUENTLY
	1	2	3	4	5
2. Participates effectively in group discussions and activities	NEVER		SOMETIMES		FREQUENTLY
	1	2	3	4	5
3. Understands problems and needs of other students	NEVER		SOMETIMES		FREQUENTLY
	1	2	3	4	5
4. Invites other students to participate in activities	NEVER		SOMETIMES		FREQUENTLY
	1	2	3	4	5

5. Has skills or abilities that are admired by peers	NEVER 1	2	SOMETIMES 3	4	FREQUENTLY 5
6. Interacts with a wide variety of peers	NEVER 1	2	SOMETIMES 3	4	FREQUENTLY 5
7. Is good at initiating or joining conversations with peers	NEVER 1	2	SOMETIMES 3	4	FREQUENTLY 5
8. Is sensitive to feelings of other students	NEVER 1	2	SOMETIMES 3	4	FREQUENTLY 5
9. Enters appropriately into ongoing activities with peers	NEVER 1	2	SOMETIMES 3	4	FREQUENTLY 5
10. Has good leadership skills	NEVER 1	2	SOMETIMES 3	4	FREQUENTLY 5
11. Notices and compliments accomplishments of others	NEVER 1	2	SOMETIMES 3	4	FREQUENTLY 5
12. Is assertive in an appropriate way when he/she needs to be	NEVER 1	2	SOMETIMES 3	4	FREQUENTLY 5
13. Is invited by peers to join in activities	NEVER 1	2	SOMETIMES 3	4	FREQUENTLY 5
14. Is “looked up to” or respected by peers	NEVER 1	2	SOMETIMES 3	4	FREQUENTLY 5

SSRS-I

15. Appears lonely	NEVER 0	SOMETIMES 1	OFTEN 2
16. Acts sad or depressed	NEVER 0	SOMETIMES 1	OFTEN 2
17. Shows anxiety with children	NEVER 0	SOMETIMES 1	OFTEN 2
18. Has low self-esteem	NEVER 0	SOMETIMES 1	OFTEN 2
19. Is easily embarrassed	NEVER 0	SOMETIMES 1	OFTEN 2
20. Likes to be alone	NEVER 0	SOMETIMES 1	OFTEN 2

Appendix B :Treatment Fidelity Checklist

Lesson 1: The Feelings Exercise Group

Observation start time: _____

I. Introduction

Minutes:_____

- Explains to students that new curriculum will be started.
- Gives examples of what will be taught and importance to social and emotional health.
- Introduction to "Henry."

Circle One: Not Implemented Partially Implemented Fully Implemented

Notes: _____

II. Read a Book from Literature List

Minutes: _____

Book Title/Author:_____

- Characters' feelings and behaviors identified.
- Questions used to guide discussion.

Circle One: Not Implemented Partially Implemented Fully Implemented

Notes: _____

III. Defining Behavior Expectations

Minutes:_____

- Lists three rules for the group.
- Discusses importance of each expectation.

Circle One: Not Implemented Partially Implemented Fully Implemented

Notes: _____

IV. Discussion of Confidentiality

Minutes:_____

- Shares that students can choose to share personal stories or not.
- Teaches students to tell stories without naming names.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

V. Introduction to the Topics Covered

Minutes:_____

- Supplement 1.1 is used to introduce topics.
- Teacher orally reviews topics.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

VI. Closure

Minutes:_____

- Teacher reviews with students that they will be learning about life skills.
- Teacher reminds students about class rules.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

Observation finish time: _____

Percentage of Components Not Implemented: _____

Percentage of Components Partially Implemented:_____

Percentage of Components Fully Implemented: _____

Appendix C: Social Validity Questionnaire

Please rate the acceptability of the goals and outcomes.	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1. Students' social and emotional concerns are great enough to warrant use of a curriculum such as *Strong Kids*.	1	2	3	4	5
2. A student's level of social and emotional competence is important to their academic success.	1	2	3	4	5
3. It is important that social and emotional knowledge and skills be taught in a school setting.	1	2	3	4	5
4. It is feasible for a regular education teacher to teach social and emotional knowledge and skills.	1	2	3	4	5
5. I feel that I have the necessary skills/training to help students with social and emotional difficulties.	1	2	3	4	5
6. I am confident in my ability to implement *Strong Kids.*	1	2	3	4	5
7. I was able to reinforce the skills taught in the *Strong Kids* lessons during other classroom activities.	1	2	3	4	5
8. The time taken to deliver the weekly lessons was acceptable.	1	2	3	4	5
9. The length of lessons was appropriate for preschool students.	1	2	3	4	5
10. The materials provided (manual, pictures, handouts) were sufficient to teach the curriculum.	1	2	3	4	5
11. The materials needed for *Strong Kids* were easy to access.	1	2	3	4	5
12. I felt that the curriculum manual alone provided sufficient training to teach the lessons.	1	2	3	4	5
13. The preparation time required to teach the lessons was acceptable.	1	2	3	4	5
14. Students demonstrated a transfer of knowledge and skills from the lessons to other school situations.	1	2	3	4	5
15. I was satisfied with the social and emotional knowledge and skills demonstrated by my students during the course of the	1	2	3	4	5

curriculum.					
16. The teaching procedure of the program was consistent with my regular teaching procedures.	1	2	3	4	5
17. *Strong Kids* was a good way to help prevent students' social and emotional problems.	1	2	3	4	5
18. I feel my students learned important skills from *Strong Kids.*	1	2	3	4	5
19. I feel my students use the skills learned from *Strong Kids*.	1	2	3	4	5
20. My students liked *Strong Kids*.	1	2	3	4	5
21. It was reasonable for me to teach the curriculum as it was designed.	1	2	3	4	5
22. I found that *Strong Kids* was easy to teach.	1	2	3	4	5
23. Students were interested in or excited for the lessons, and showed active participation in them.	1	2	3	4	5
24. Most teachers would find *Strong Kids* suitable for improving social and emotional competence.	1	2	3	4	5
25. I would recommend the use of *Strong Kids* to other teachers.	1	2	3	4	5
26. I would like to implement *Strong Kids* again.	1	2	3	4	5
27. I enjoyed teaching *Strong Kids*.	1	2	3	4	5

What problems, if any, did you have with the implementation of the curriculum?

_____

_____

_____

_____

Would you change the way the lessons are taught?

How?_____

_____

_____

_____

What changes would you make to the curriculum content?_____

_____

_____

_____

What changes did you observe in your students?

_____

_____

_____

_____

_____

Additional comments:

_____

_____

_____

_____

Appendix D: Consent Forms

(Treatment group) Teacher Consent to Participate in Strong Kids Study

Dear Teacher,

Introduction

This research study is being conducted by Thomas Kramer, a graduate student at Brigham Young University, together with his faculty advisor Paul Caldarella, Ph.D. This study will evaluate the *Strong Kids* curriculum, a social and emotional learning program, which your school administration has adopted.

Procedures

If you agree to participate in the study you will be asked to complete a 20-item rating scale on each of your students measuring their internalizing and peer-relationship behaviors. You will be asked to complete this form on each student two times, once prior to teaching the *Strong Kids* curriculum, and then again after all the lessons have been completed. The time required to complete the form is approximately 5-10 min per student. In addition, a research observer will periodically attend approximately 1/3rd of your *Strong Kids* teaching sessions to record how well the lessons are implemented. Finally, you will be asked to complete a 27 item social validity questionnaire at the end of the study, to provide your ratings about the acceptability of *Strong Kids'* goals, procedures, and outcomes.

Risks/Discomforts

There are minimal risks to you for participating in this study. You may possibly feel stress when trying to rate each of your students on the pre- and post-test measures, and it will require approximately 90 minutes completing the measures on each occasion.

Benefits

There are no direct benefits to you. The results of this study will help further the validation of the *Strong Kids* social and emotional learning curricula in elementary school settings.

Confidentiality

No identifying information about you will be associated with the ratings you provide on each student, the classroom observations conducted by the trained observers, or your evaluation of the *Strong Kids* curriculum. Any information on you provide will be securely stored and only research personnel will have access to your data. A school summary report, void of individually identifiable teacher data, will be shared with school administration at the conclusion of the study.

Compensation

You will receive $50 following the completion of the 20 item pre-evaluation, and another $50 following the completion of the post-evaluation and social validity survey, for a total of $100.

Participation

Your participation in this study is voluntary. You have the right to withdraw from this study at any time. Refusal to participate or withdrawing from this study will not affect your employment or standing at your school in any way.

Questions about the Research

If you have any questions regarding this study, you may contact Thomas Kramer or Dr. Paul Caldarella at paul_caldarella@byu.edu or calling (801) 422- 5081.

Questions about your Rights as Research Participants

If you have any questions with regards to your rights as a participant, you may contact the IRB Administrator, Brigham Young University, A-285 ASB, Provo, UT 84602; 801-422-1461 or irb@byu.edu.

I have read, understood, and received a copy of the above consent, and desire of my own free will, to participate in this study to evaluate the effectiveness of the *Strong Kids* curriculum.

Printed Name_____

Signature_____Date_____

(Control Group)Teacher Consent to Participate in Strong Kids Study

Dear Teacher,

Introduction

This research study is being conducted by Thomas Kramer, a graduate student Brigham Young University, together with his faculty advisor Paul Caldarella, Ph.D. This purpose of this study is to evaluate the *Strong Kids* program, a social and emotional learning program, which is being implemented at xxxx Elementary School. Your school, although not implementing the *Strong Kids* curriculum, has been selected to participate in this study as it is similar demographically to xxxx Elementary, and will be used for comparison purposes.

Procedures

If you agree to participate in the study you will be asked complete a 20-item rating scale on each of your students which measures internalizing behaviors and peer-relations behaviors. The time required to complete the form is approximately 5-10 min per student. You will be asked to complete this form two times during the school year, once in early October and again near the end of February. In addition, at the beginning of October you will be asked to identify those students in your class most at-risk for internalizing and externalizing behaviors by completing the Systematic Screening for Behavioral Disorders (SSBD), which takes approximately 30 minutes to complete.

Risks/Discomforts

There are minimal risks to you for participating in this study. You may possibly feel stress when trying to evaluate each of your students on the pre- and post-test measures, and it will require approximately 90 minutes completing the rating scales on each occasion.

Benefits

There are no direct benefits to you. The results of this study will help further the validation of the *Strong Kids* social and emotional learning curricula in elementary school settings.

Confidentiality

No identifying information will be associated with the ratings you provide on each student. Any information on you provide will be securely stored and only research personnel will have access to your data.

Compensation

You will receive $50 following the completion of the 20 item pre-evaluation on each student, and the SSBD screening, and another $50 following the completion of the 20-item post-evaluations, for a total of $100.

Participation
Your participation in this study is voluntary. You have the right to withdraw from this study at any time. Refusal to participate or withdrawing from this study will not affect your employment or standing at your school in any way.

Questions about the Research
If you have any questions regarding this study, you may contact Thomas Kramer or Paul Caldarella at paul_caldarella@byu.edu or calling (801) 422- 5081.

Questions about your Rights as Research Participants
If you have any questions with regards to your rights as a participant, you may contact the IRB Administrator, Brigham Young University, A-285 ASB, Provo, UT 84602; 801-422-1461 or irb@byu.edu.

I have read, understood, and received a copy of the above consent and desire of my own free will, to participate in this study to evaluate the effectiveness of the *Strong Kids* curriculum.

Printed Name_____

Signature_____Date_____

Dear Parent or Legal Guardian,

This year at xxxx Elementary a social and emotional learning program will be taught in all classes. The program is called *Strong Kids,* and the purpose of this program is to teach children to recognize and manage their emotions, have better social relationships, and make good decisions. Researchers at Brigham Young University are going to evaluate what kind of effect this program has on the students.

Before the program starts, every teacher will be asked to rate each student on certain behaviors, for example, how often they act anxious or sad, or how well they can get along with other students. After the program ends (4 months later) the teachers will complete the same ratings on each student again. This will help show if the program has an effect on the students' behavior. There are very few risks associated with having your child rated by their teacher. Because the teacher needs to pay closer attention to your child in order to rate them, it may affect how they act towards your child.

Although you will not receive any direct benefits for allowing your child to participate in this study, results from the study could help the school decide how to best improve students' behavior.

If you decide to let your child be rated by their teacher, you should know that your child's information will be kept confidential. His or her name will not be attached to the research and an ID number will be used instead. The completed rating forms will be stored securely on BYU's campus.

Your child's teacher will not complete the ratings on your child if you do not want them to, and this will not affect your child's standing at the school. This study is completely voluntary. If you don't want your child's information to be used for this study, or if you have questions about the study, please call or email Thomas Kramer or Paul Caldarella at paul_caldarella@byu.edu or 801-422-5801. However, because the entire school is teaching the *Strong Kids* program, your child will still participate in the lessons.

If you have any questions about your rights as a research participants you can contact the IRB Administrator, Brigham Young University, A-285 ASB Campus Drive; Provo, UT 84602; (801) 422-1461; irb@byu.edu.

Dear Parent or Legal Guardian,

This year xxxx Elementary will be taking part in a study of a program called *Strong Kids*. The purpose of this program is to teach children to recognize and manage their emotions, have better social relationships, and make good decisions. Researchers at Brigham Young University are going to evaluate what kind of effect this program has on the students.
This program is not being taught at xxxx Elementary, but students at xxxx Elementary will be observed and compared to students at another elementary school. Every teacher will rate all of their students on a few different behaviors, for example, how often they act anxious or sad, or how well they can get along with other students. The teachers will complete these ratings twice, once near the beginning of the year, and again near the end of the school year. This helps the researchers see how student behavior changes throughout the school year.

There are very few risks associated with having your child rated by their teacher. Because the teacher needs to pay closer attention to your child in order to rate them, it may affect how they act towards your child.

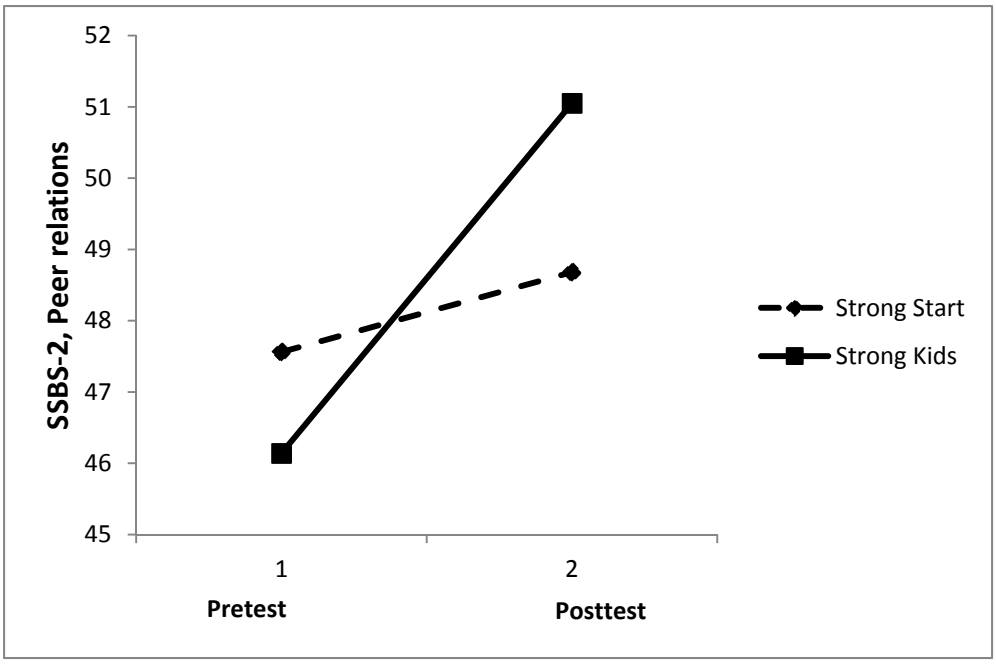
Although you will not receive any direct benefits for allowing your child to participate in this study, results from the study could help schools decide how to best improve students' behavior.

If you decide to let your child be rated by their teacher, you should know that your child's information will be kept confidential. His or her name will not be attached to the research and an ID number will be used instead. The completed rating forms will be stored securely on BYU's campus.

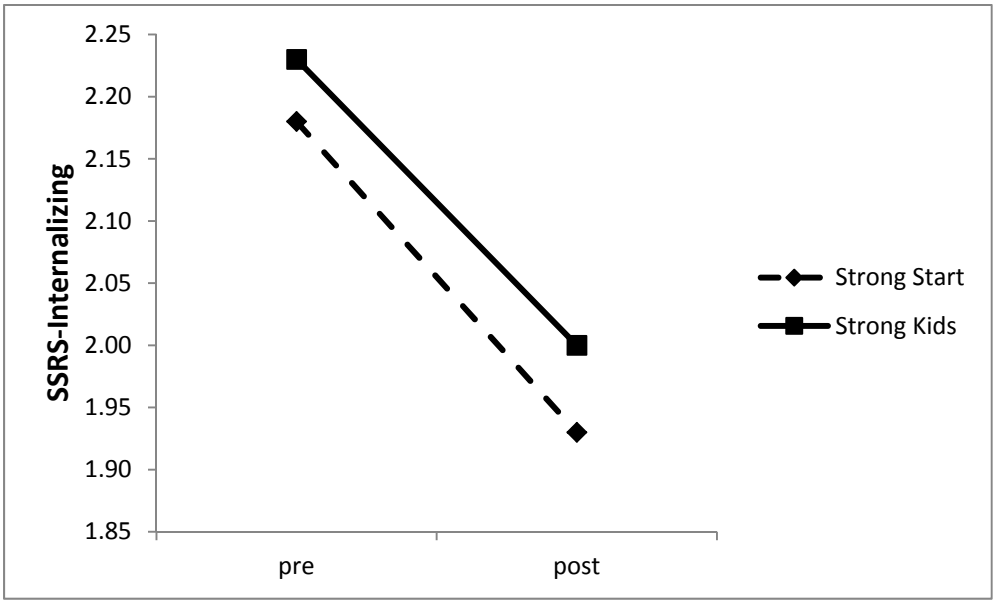
Your child's teacher will not complete the ratings on your child if you do not want them to, and this will not affect your child's standing at the school. This study is completely voluntary. If you don't want your child's information to be used for this study, or if you have questions about the study, please call or email Thomas Kramer or Paul Caldarella at paul_caldarella@byu.edu or 801-422-5801.

If you have any questions about your rights as a research participants you can contact the IRB Administrator, Brigham Young University, A-285 ASB Campus Drive; Provo, UT 84602; (801) 422-1461; irb@byu.edu.

Appendix E: Additional Analyses

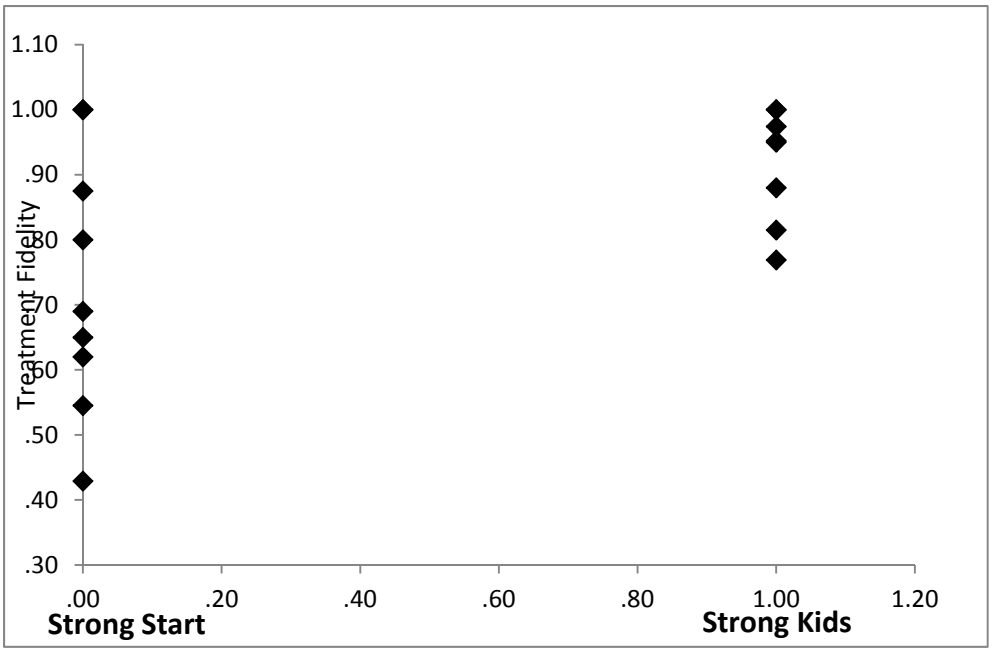


Strong Kids v Strong Start; Prosocial Behaviors, SSBS.$F(1,346) = 12.69$, $p < .001$, $\eta^2 = .035$



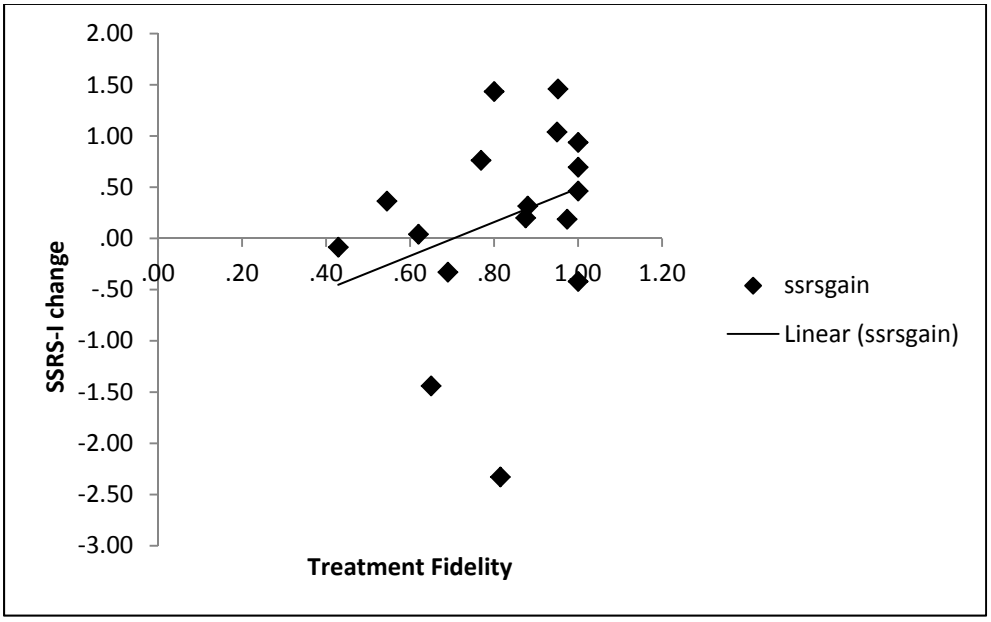
Strong Start vs. Strong Kids, SSRS–Internalizing

Non-significant results.$F(1, 346) = .009$, $p >. 05$.



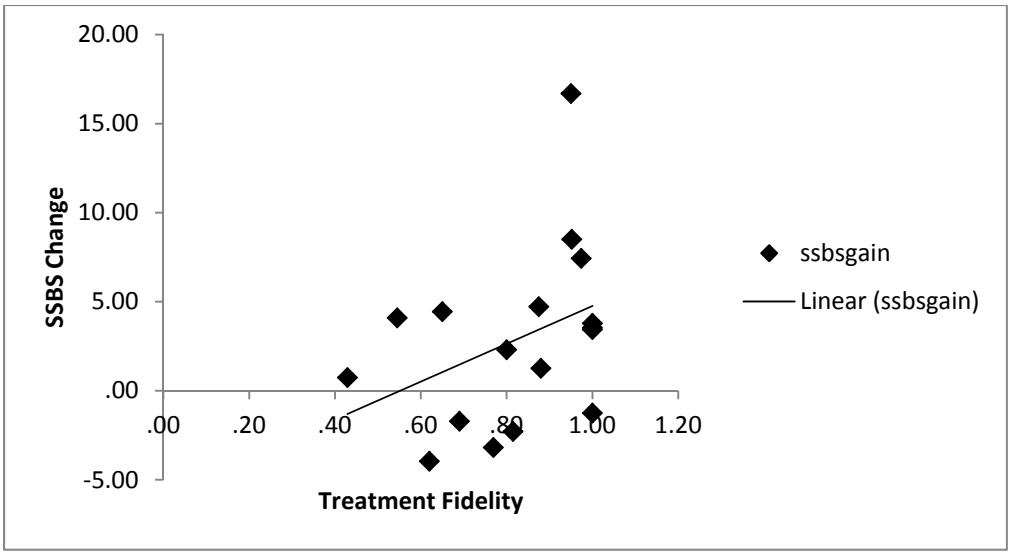
Strong Start vs. Strong Kids, Treatment Fidelity

$r(15) = .527, p < .05$ T-test, $t = -2.51$, $p = .03$



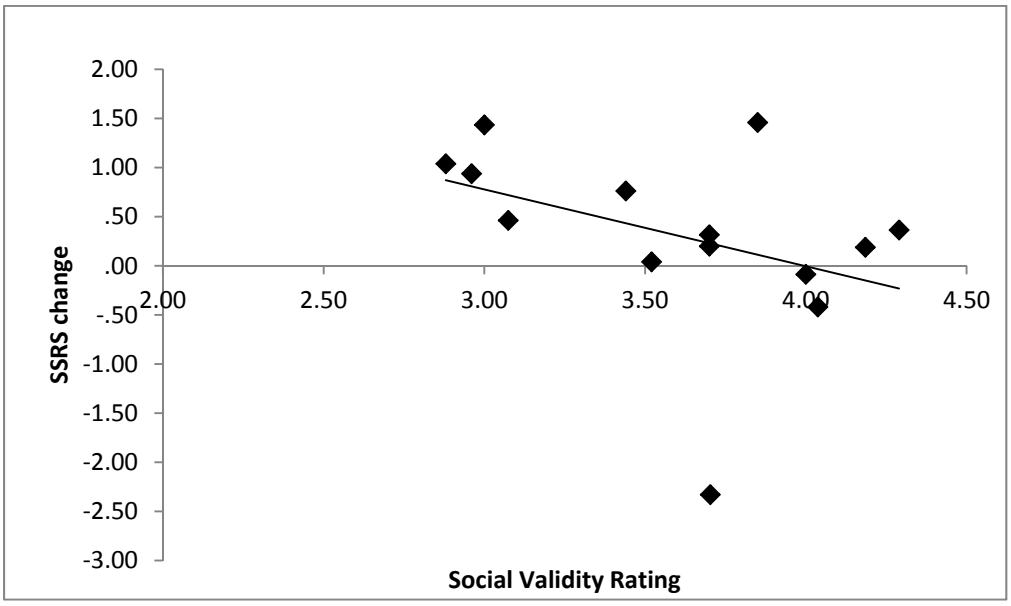
Average SSRS-I change by teacher, correlation with treatment fidelity

$r(15) = .306, p > .05$



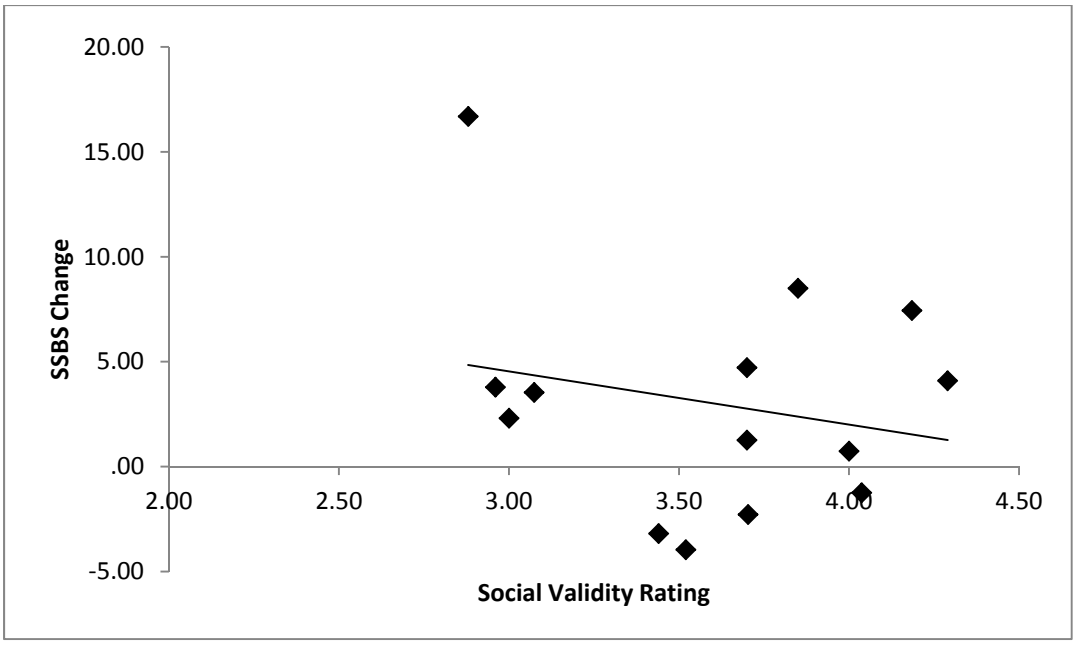
Average SSBS-2 change by teacher, correlation with treatment fidelity.

r(15) = .376 , *p*> .05



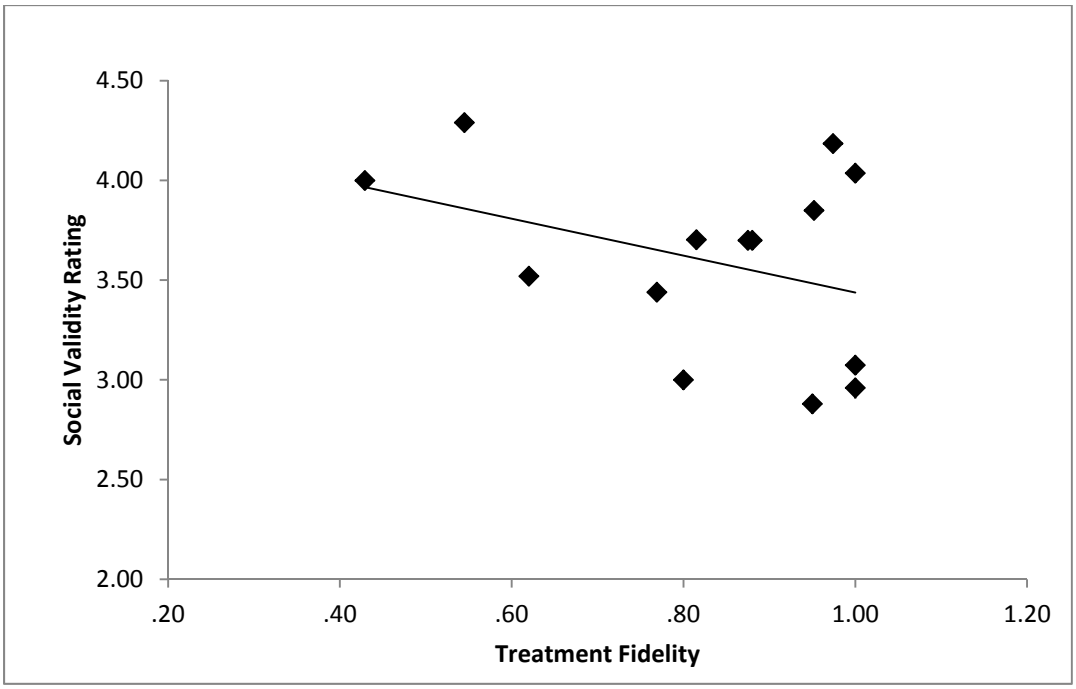
Average SSRS-I change by teacher, correlated with social validity rating

r(12) = -.39, *p*> .05.



Average SSBS-2 gain by teacher, correlated with social validity ratings

$r(12) = -.219$, $p > .05$.



Correlation of social validity and treatment fidelity.

$r(12) = -.36$, $p > .05$.