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## Promoting Social and Emotional Learning in Second Grade Students: A Study of the Strong Start Curriculum

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**Title:** Promoting Social and Emotional Learning in Second Grade Students: A Study of the *Strong Start* Curriculum

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## Abstract

The promotion of social and emotional learning (SEL) in schools may help prevent emotional and behavioral problems of students. This study evaluated the effects of a SEL curriculum, *Strong Start*, on the social-emotional competence of 26 second grade students, using a quasi-experimental, non-equivalent control group design. Results revealed statistically significant and meaningful improvements in teacher ratings of students' internalizing and peer-related prosocial behaviors, particularly for students at greater risk. Conversely, control group students experienced significant worsening of internalizing behaviors and decreased levels of peer-related prosocial behaviors. No changes were reported in externalizing behaviors for either group. Treatment integrity and social validity ratings of *Strong Start* were high. Limitations and implications of this study are addressed.

Key words: social-emotional learning, prevention, elementary schools

Promoting Social and Emotional Learning in Second Grade Students: A Study of  
the *Strong Start* Curriculum

Many educators, parents, and policy makers are advocating that schools provide instruction and training in social and emotional competence to help prevent emotional and behavioral problems among students (Greenberg et al., 2003). Social and emotional learning (SEL) programs, developed as prevention and intervention strategies, have demonstrated efficacy in research studies (Greenberg et al.). However, schools have been slow to adopt and sustain these programs or to implement them effectively (Domitrovich & Greenberg, 2000; Walker, 2004; Walker & Gresham, 2003). The focus of this study was to evaluate *Strong Start* (Merrell, Parisi, & Whitcomb, 2007), a recently developed SEL program designed to bridge the gap between research and practice in addressing the social and emotional needs of kindergarten, first and second grade students.

*Social and Emotional Problems*

Social and emotional problems are generally classified into two domains: internalizing and externalizing (Achenbach & McConaughy, 1992). Externalizing problems are described as “acting out” behaviors that may include physical and verbal aggression, anger, irritability, and defiance. Internalizing problems include depression, anxiety, shyness, social withdrawal, sadness, fear, and difficulty with demands that require social assertion (Eisenberg et al., 2005).

Though much research has focused on externalizing problems in school-aged children, significantly less attention has been paid to prevention of and interventions for internalizing disorders (Christensen, Young, & Marchant, 2007; Greenberg, Domitrovich, & Bumbarger, 2001). Internalizing problems are often overlooked because they are not

disruptive (Gresham & Kern, 2004) but, like externalizing problems, if left untreated they may develop into emotional and behavioral disorders (EBD), which are associated with a number of negative outcomes (Kauffman, 2005).

Several risk factors for EBD have been identified, including biological, family, school, and cultural factors (e.g., prematurity, family dysfunction, poor attachment to school, and poverty; Kauffman 2005; Walker & Gresham, 2003; Doll & Lyon, 1998). Despite these risk factors, some children exhibit the ability to cope with their adverse circumstances and achieve positive outcomes, an attribute known as *resilience*. Researchers have identified some of the protective traits of resilience, including an easy-going disposition, a close and affectionate relationship with a caregiver, strong connections with institutions or schools, close peer friendships, and prosocial behaviors (Doll & Lyon). As a prevention or early intervention strategy, SEL programs often focus on teaching the competencies which foster resilience, highlighting the importance of doing so at an age early enough to potentially eliminate problems instead of just managing them (Joseph & Strain, 2003; Walker, Ramsey, & Gresham, 2004).

### *The Role of Schools*

Because many children do not receive the needed social and emotional learning in the home or community, schools can serve as an additional support and effective venue through which resilience can be fostered (Doll & Lyon; Elksnin & Elksnin, 2006). It is estimated that as many as 20% of children have mental health problems and that 75-80% of these students do not receive treatment (U.S. Dept. of Health and Human Services, 2001; Walker et al., 2004). Of those who are treated, 70-80% receive services in a school setting (Rones & Hoagwood, 2000). Greenberg and colleagues (2003) assert that schools

must expand their focus by including SEL instruction which fosters social and emotional competence, enabling students to develop into healthy, productive citizens. Childhood is an especially important time because it is a unique period of growth in which social and emotional development is occurring (Miller, Gouley, Seifer, Zakriski, Eguia, & Vergnani, 2005).

### *Social and Emotional Learning*

SEL has been defined as the process of acquiring the fundamental skills needed to recognize and manage emotions, develop feelings of caring and concern for others, make responsible decisions, establish positive relationships, and handle challenging situations effectively (Collaborative for Academic, Social, and Emotional Learning [CASEL], 2008). The current study focused on the ability to regulate and understand emotions and engage in prosocial behaviors. To regulate and understand emotions includes being able to control impulsive feelings and behaviors, identify and moderate negative feelings, and enhance positive feelings to comfort oneself (Payton et al., 2000). Research suggests that emotion regulation may actually be *the* critical component of social and emotional competence (Blair, Denham, Kochanoff, & Whipple, 2004). An inability to regulate emotions appropriately often leads to the development of internalizing and externalizing problems (Eisenberg et al., 2001).

Another key component of SEL is the ability to engage in prosocial behaviors. Such behaviors include helping, sharing, and caring to build and maintain positive peer relations. Perceiving others' emotions (perspective taking) and solving interpersonal problems are also important in this regard (Eisenberg, Fabes, & Spinrad, 2006; Payton et al., 2000). Effective SEL programs are designed to promote such competencies which

predict positive outcomes such as peer acceptance and higher academic achievement (Trentacosta & Izard, 2007).

### *Purpose*

The current study evaluated *Strong Start: A Social and Emotional Learning Curriculum* (Merrell et al., 2007), part of the *Strong Kids* program. This series of curricula (*Strong Start, Grades K-2; Strong Kids, Grades 3-8; and Strong Teens, Grades 9-12*) targets students with internalizing problems, but may support all students in developing social and emotional competence and resilience. *Strong Start* is one of the few SEL programs designed for primary grade students. Several empirical studies of the *Strong Kids* and *Strong Teens* curricula have demonstrated significant increases in older students' emotion knowledge and decreases in their negative symptoms (Feuerborn, 2004; Gueldner, 2007; Merrell, Juskelis, Tran, & Buchanan, 2008). But this study is the first to evaluate the efficacy of *Strong Start*. The following three specific questions were examined: (a) Do students who participate in *Strong Start* show a change in externalizing and internalizing behaviors and peer-related prosocial behaviors? (b) Do students whose pretest scores indicate higher levels of risk show greater changes at posttest than students at lower risk? (c) Do participating students and teachers find the *Strong Start* curriculum to be socially valid (e.g., acceptable, important)?

### Method

#### *Setting*

This study was conducted at a suburban elementary school in Utah. The school's population consisted of 502 students: 87% were Caucasian, 10% were Hispanic, and 3% were from other ethnic groups. Of this population, 31% qualified for free or reduced price lunch, and 14% received special education services.

### *Participants*

*Selection.* An overview of the study was presented to the school principal and to the two second grade teachers, after which the teachers consented to participate. The classes were randomly designated as treatment or control group. Informed consent from parents and assent from students were then obtained.

*Treatment classroom.* The teacher of the treatment classroom was a 24-year-old Caucasian female in her second year of teaching who held a bachelor's degree in elementary education. The treatment classroom consisted of 24 students (11 females and 13 males) ages 7 and 8. Four students were Hispanic, and the remaining students were Caucasian.

*Control classroom.* The teacher of the control classroom was a 39-year-old Caucasian female completing an internship for a bachelor's degree in elementary education. The control classroom consisted of 25 students (9 females and 16 males) ages 7 and 8. One student was Native American, and the remaining students were Caucasian.

*Strong Start instructor.* The *Strong Start* instructor, one of the investigators in the study, was a 27-year-old Caucasian female. She was a certified elementary school teacher in her fourth year of teaching and was completing a master's degree in Family and Human Development. She had taught second grade for three years and was the arts specialist in the school when the study took place. In addition to teaching the *Strong Start* curriculum in the treatment classroom, she coordinated the collection of teacher rating scales.



### *Materials*

Materials used to implement *Strong Start* included an overhead projector, a screen, instructional supplies (e.g. paper, markers, etc.), classroom tickets to reinforce appropriate behavior, and a stuffed animal to be used as the curriculum mascot (as suggested in the curriculum manual).

### *Dependent Variable & Measures*

The dependent variables in the study consisted of teacher ratings of students' internalizing, externalizing, and peer-related prosocial behaviors. Because of the developmental level of young children (e.g., limitations in literacy and abstract thinking), it is difficult to assess their perceptions of social and emotional competence through self-report measures. Therefore, we relied on teacher ratings of students' peer relations and internalizing and externalizing behaviors. These ratings were completed one week prior to and one week following the administration of the ten *Strong Start* lessons. The three subscales used for these ratings were selected based on recommendations from the lead author of *Strong Start* for measures that would be relatively reliable and valid, but also brief and feasible for teachers to complete on all students in a second grade classroom (K. W. Merrell, personal communication, October 12, 2007).

*School Social Behavior Skills (SSBS)*. The SSBS is a norm-referenced, standardized instrument designed to evaluate the social competence and antisocial behavior of children ages 5 to 18 (Merrell, 2002). The Peer Relations subscale (consisting of 14 items) of the SSBS was used in this study. This subscale measures social skills and attributes that are important in establishing positive relationships and gaining social acceptance from peers. Internal consistency (*alpha*) of elementary teacher (K-6) ratings

has been reported as .96 for the Peer Relations subscale, indicative of a reliable measure. Sample items include “Offers help to other students when needed” and “Is good at initiating or joining conversations with peers.” Teachers respond on a 5-point Likert scale indicating frequency of the observed behavior, ranging from *never* (1) to *frequently* (5).

*Social Skills Rating System (SSRS)*. Teachers completed the Externalizing and Internalizing subscales (each consisting of six items) of the elementary school version of the SSRS (Gresham & Elliot, 1990). The SSRS is a norm-referenced, standardized instrument designed to evaluate the prosocial skills and problem behaviors of students in grades K to 12. Internal consistency (*alpha*) of elementary teacher ratings has been reported as .88 for the Externalizing subscale and .78 for the Internalizing subscale, indicative of reliable measures. Sample items on the Externalizing subscale include “*Gets angry easily*” and “*Fights with others.*” Items on the Internalizing subscale include “*Appears lonely*” and “*Acts sad or depressed*” (Gresham & Elliott, 1990, p. 4). The SSRS uses a 3-point scale, which indicates frequency of the behavior, ranging from *never* to *very often*. However, to maintain consistency, and potentially increase sensitivity of the measure, the 3-point scale was modified to the 5-point Likert scale used in the SSBS.

#### *Independent Variable*

The independent variable was the implementation of *Strong Start: A Social and Emotional Learning Curriculum* (Merrell et al., 2007). Because *Strong Start* was designed for use with early elementary students it avoids reliance on abstract thinking or reading ability. The curriculum focuses on preventing internalizing disorders and fostering pro-social behaviors and competencies. The content of the 10 *Strong Start*

lessons includes topics such as understanding one's own feelings and the feelings of others, learning about being a friend, solving problems, dealing appropriately with anger, and handling anxiety.

The *Strong Start* lessons were taught once a week over a period of 10 weeks. Lessons lasted approximately 45 minutes and were taught by the *Strong Start* instructor, with the classroom teacher present. As outlined in the curriculum, a *Strong Start* bulletin was sent home with students at the conclusion of each lesson, explaining to parents and guardians what was taught and encouraging them to reinforce the skills at home. The teacher in the treatment classroom also occasionally discussed content from the *Strong Start* lessons during story time, class meetings, and as issues would arise regarding peer interactions in the classroom. While students in the treatment classroom were receiving the *Strong Start* lessons, those in the control classroom were receiving regular instruction in academic subjects, mainly math.

#### *Treatment Fidelity*

A research assistant observed each *Strong Start* lesson and recorded on a fidelity checklist the completion of each lesson component, noting the degree of implementation (*not, partially, or fully implemented*). Results of the observations indicated that 95% of all lesson components were completed fully. The remaining 5%, which were not or were only partially implemented, were lesson summaries. The reason for partial and non-implementation was insufficient time at the end of two of the lessons. The observer also recorded the duration of each lesson as well as the level of student participation as measured by opportunities to respond and number of responses. Lessons averaged 47 minutes. Students were given an opportunity to respond and did respond an average of 38

times per lesson (recorded from four lessons) and showed active involvement in all lessons.

### *Social Validity*

Social validity was measured at the completion of the study by administering a questionnaire to the teacher and students of the treatment classroom. Teacher social validity was measured using the *Intervention Rating Profile-15* (Martens, Witt, Elliot, & Darveaux, 1985), adapted to more closely align with the independent variable. Questions surveyed the teacher's perceptions regarding the *Strong Start* curriculum, the time dedicated to the lessons, and its overall worth. The questionnaire consisted of 15 items with a 6-point Likert scale ranging from *strongly disagree* to *strongly agree*. Higher scores reflect better acceptance of interventions; ratings above 52.5 have been considered to represent acceptability by the rater (VonBrock & Elliott, 1987). The teacher was also interviewed for additional comments regarding her perceptions of the curriculum.

Student social validity was measured using the *Student Self-Assessment of Social Validity (Primary Gr K-3)* (Lane & Beebe-Frankenberger, 2004), adapted to more closely align with the independent variable. This questionnaire consisted of 10 questions, 8 of which were answered using a 4-point Likert Scale, and 2 of which were open ended. The Likert scale consisted of four options: a smiley face meaning *yes*, a straight face meaning *kind of*, a frowny face meaning *no*, and a question mark meaning *I don't know*. The classroom teacher administered the questionnaire to all students by using an overhead projector and reading each question aloud.

### *Design and Analysis*

This study used a quasi-experimental, non-equivalent control group design. This was the first study of the *Strong Start* curriculum employing both a treatment and control group. Data analysis consisted of calculating descriptive statistics and conducting *t* tests for dependent (within group) and independent (between groups) means, as well as Cohen's *d* effect size estimates. To examine whether students at greater risk differed in their response to the *Strong Start* curriculum from students at lower risk, *t* tests for dependent means were also conducted.

### Results

Results of the within-group analyses are found in Table 1. On the Internalizing and Externalizing subscales of the SSRS a *decrease* in raw scores indicates improved functioning, while on the Peer Relations subscale of the SSBS an *increase* in raw scores indicates improved functioning. The results indicated that the treatment group experienced significant improvements on both the SSRS Internalizing subscale and the SSBS Peer Relations subscale. These gains were contrasted with significant worsening on both subscales for the control group. Neither the control nor treatment group experienced any significant changes on the Externalizing subscale of the SSRS.

<Insert Table 1 about here>

To examine whether control and treatment groups differed significantly prior to and following implementation of the *Strong Start* curriculum, between-groups *t*-tests for independent means were conducted. Results revealed no significant difference at pretest for any of the measures. A comparison of posttest means revealed significantly higher scores on the SSRS Internalizing subscale ( $t = -6.19, p < .001, d = 1.77$ ) and significantly

lower scores on the SSBS ( $t = 3.1, p < .01, d = .88$ ) for the control group. No significant differences between groups were found for the SSRS Externalizing subscale.

Within group t-tests for dependent means were conducted to examine whether students at greater risk improved more than students at lower risk following the *Strong Start* curriculum. In the treatment group 5 students (20.8%) were identified whose pretest scores placed them in the *at-risk* category on the SSBS Peer Relations subscale as outlined in the test manual (Merrell, 2002). These 5 students also scored in the highest 20% on either the SSRS Internalizing or Externalizing subscale--further indications that they were at greater risk. Thus we labeled these students as *at risk*. This percentage is similar to estimates of the three-tiered prevention model, which suggests that approximately 20% of students are at risk or at high risk (Walker et al., 2004).

The results indicated that both the at-risk and average students experienced significant increases on the SSBS Peer Relations subscale (see Table 2). The at-risk students also experienced significant decreases on the SSRS Internalizing subscale, though the change in average students was not significant. Although neither the at-risk nor average students experienced any significant changes on the Externalizing subscale of the SSRS, the at-risk students' scores did decrease with a small but meaningful effect size.

<Insert Table 2 about here>

The social validity rating of the treatment classroom teacher on the adapted *Intervention Rating Profile-15* was 82 out of 90 (91%), suggesting a high level of satisfaction with the program. During the follow-up interview the teacher commented that she was pleased with the curriculum and felt it was particularly relevant for young

students; she considered the skills of recognizing and managing emotions to be the strength of the curriculum. She indicated that the lessons were well structured, fit with her instructional style, and complemented the state's second grade core social studies requirements. She wished the curriculum had been implemented earlier in the year to prevent the "social friction" that had already developed in her classroom. However, she was concerned that the lessons seemed too long for her students and suggested that lessons could perhaps be divided and given twice a week. She also thought that there was not enough emphasis on solving interpersonal problems. She indicated that she would recommend the curriculum to others. The teacher ended her interview positively, noting the change she observed in an internalizing student: "He has come a long way. He wouldn't even read aloud to me at first."

On the adapted *Student Self-Assessment of Social Validity*, positive responses comprised 74% of total responses, with 14% being neutral and 12% being negative, suggesting that most students were pleased with the program. Examples of student responses to open-ended questions asking about their likes and dislikes regarding the curriculum included the following: "She taught us about feelings," "To learn to be kind," "Being able to know how other people feel," "It was hard to just sit there," and "I could not talk a lot."

### Discussion

The findings of this study support the use of *Strong Start* as a tool for fostering social and emotional competence in second grade students. Results suggest that students who received the curriculum experienced significant increases in peer-related prosocial behaviors and significant decreases in internalizing behaviors. The curriculum seemed to

be of particular benefit to at-risk students who scored higher on teacher ratings of internalizing behaviors and lower on ratings of peer-related prosocial skills. The decrease in internalizing behaviors is consistent with results from previous research on the *Strong Kids* program (Merrell et al., 2008). Externalizing behaviors decreased only slightly, which is consistent with the fact that *Strong Start* was not designed to be a comprehensive program for all behavior problems (Merrell et al., 2007). Results indicate that students in the control group experienced an increase in internalizing behaviors and a decrease in prosocial behaviors, suggesting the preventative potential of the curriculum.

The fact that students in the treatment group showed significant improvement in their peer-related prosocial behaviors is important. These behaviors, such as showing empathy, sharing, and cooperating, are essential in making friends and maintaining positive relationships, which serve as protective factors (Doll & Lyon, 1998). These results support other research indicating that skills contributing to resilience can be systematically taught and learned (Merrell et al., 2007).

Another important finding of this study was that the curriculum seemed to be of particular benefit to those students who had the greatest deficits in prosocial behaviors. As might be expected in an effective treatment, students who had the most potential for change experienced the greatest improvement. A three-tiered prevention model (Walker et al., 2004) is commonly used to classify students into three levels of risk (primary, secondary and tertiary) and indicate the proportions of students typically found at each level. Results of this study suggest that students identified as at risk, who would potentially be classified into secondary or tertiary levels, benefited comparatively more



than the rest of the class. Thus the curriculum appears to have a preventative effect at the primary level and intervention effects at the secondary level.

In this study *Strong Start* was used as a universal intervention. Though the treatment group as a whole experienced a significant decrease in internalizing behaviors, the effect size was much larger for the at-risk students. Results suggest that the curriculum provided positive results for at-risk students without requiring a separate targeted intervention. This could have important implications, because difficulty in identifying the frequently overlooked internalizing students is a common barrier to their receiving treatment (Gresham & Kern, 2004). A universal intervention would provide needed help for students most at risk for internalizing disorders without individually identifying and treating them. When intervention is received at an early age, internalizing symptoms are most successfully reduced (Durlak & Wells, 1997), a strength of *Strong Start* with its focus on primary grade students (Merrell et al., 2007).

Internalizing students are often socially withdrawn or isolated and may be deficient in peer-related prosocial behaviors (Reynolds & Miller, 2003). Pretest data revealed that 4 of the 5 students identified as at risk on the SSBS Peer Relations subscale were also among those rated highest on the Internalizing subscale of the SSRS. Results suggest that these two domains are closely related and that the *Strong Start* curriculum may effectively target both.

Results failed to show any significant effects of *Strong Start* curriculum on the externalizing behaviors of the treatment group. The control group also did not experience a significant change in this area. Thus no preventative effects for externalizing behaviors could be attributed to *Strong Start*. This suggests that the program may not be equally

effective for all types of emotional and behavioral problems and that an intervention more focused on externalizing behaviors may be needed when this is an area of concern.

Despite the prevalence of evidence-based SEL programs, many schools have been reluctant to use them (Greenberg et al., 2003). When a program is overly complex or time consuming, or if it requires outside materials and more than one adult, implementation integrity is unlikely (Lane & Beebe-Frankenberger, 2004). A strength of *Strong Start* was its ease of implementation. Feasibility (e.g., being low cost, providing semi-scripted lessons, being easily taught) was considered a high priority in the development of the curriculum (Merrell et al., 2007). The classroom teacher responded positively about the importance of social-emotional learning and the social validity of the *Strong Start* curriculum.

#### *Limitations and Future Research*

Although results of this study were generally favorable, there were some limitations. Since students were not randomly assigned to treatment and control groups, this study used a quasi-experimental design. Random assignment is often not acceptable or feasible in school settings (Borman, 2002). Teachers were also not blind to treatment conditions and thus their ratings of students may have been influenced by knowing which group their students were in.

There were also limitations regarding the measures used in this study. Only subscales from the SSBS and SSRS were used. Without using the full scales, definitive estimates of students' risk levels could not be made. In addition, no student self-ratings or parent ratings were included. Future studies could include these additional ratings,

although there are few valid and reliable self-report measures for children below ages 8 or 9. Direct observations of students' behaviors could also be included in future studies.

Another limitation of the study was that the sample was small, particularly for students identified as at greater risk, and consisted primarily of Caucasian students. Therefore, the degree to which results can be generalized to more diverse populations is uncertain. Future research should include a larger sample with more racial and economic diversity. Future studies could examine the effects of *Strong Start* on students in kindergarten and first grade, for whom the curriculum was also intended. Additionally, variations to the curriculum schedule may be studied, such as dividing lessons and teaching them for shorter periods of time with more frequency, as was suggested by the classroom teacher, in order to improve students' attention.

Though the regular classroom teacher was present for each *Strong Start* lesson, she did not teach them herself. This must be considered a limitation to the social validity of the study. Had the weekly lesson been viewed as an addition to her regular teaching requirements rather than a "break" from teaching, her opinion of the curriculum might have been different. Students' perceptions may also have been skewed because the curriculum was taught by an "outside" teacher, to whom the students may have responded differently than they would to their regular teacher. Although the lessons are semi-scripted and an outline is provided for each lesson, the inherent variability of teaching styles may affect outcomes. Having regular classroom teachers present the *Strong Start* lessons would help extend the literature.

Finally, this study did not include a follow-up or a long-term assessment. Although optional booster lessons are available as part of the curriculum, these were not

taught as part of this study due to the school year ending. Though short-term results indicated positive changes, without a long-term assessment it is uncertain whether these changes were sustained.

### *Conclusion*

In sum, *Strong Start* showed promising results as a way to reduce internalizing symptoms and increase peer-related prosocial behaviors of second grade students. This study adds to the growing body of research which supports SEL as an effective means to reduce emotional and behavioral problems in school settings. *Strong Start's* unique contribution to the field of SEL may be its focus on feasibility. Its emphasis on prevention and early intervention with students' social and emotional health reflects a shift in focus away from traditional reactive attempts to address problems. Research into the prevention and treatment of internalizing disorders among young students is limited and therefore should not be neglected. As this is the first study to evaluate *Strong Start*, the results should be considered preliminary. Further evaluation of SEL programs such as *Strong Start* may add to our understanding of these disorders and offer help to the students, parents, and educators affected by them.

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Table 1

*Pretest Posttest Raw Score Comparisons of Treatment and Control Group*

Measure	Pretest		Posttest		<i>d</i>	<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
<b>SSBS</b>						
<i>Treatment</i>	47.71	14.39	55.58	12.44	.59 <sup>b</sup>	4.70***
<i>Control</i>	48.72	13.17	45.48	10.31	.27 <sup>c</sup>	-3.34**
<b>SSRS-I</b>						
<i>Treatment</i>	10.96	6.44	9.00	3.31	.38 <sup>c</sup>	-2.23*
<i>Control</i>	10.72	3.65	14.20	2.53	1.12 <sup>a</sup>	6.25***
<b>SSRS-E</b>						
<i>Treatment</i>	8.88	4.32	8.79	5.04	.02	-.24
<i>Control</i>	7.96	4.23	8.36	3.44	.10	1.51

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , effect size (*d*): a = large, b = medium, c = small

Table 2

*Pretest Posttest Raw Score Comparisons of At-Risk and Average Students*

Measure	Pretest		Posttest		<i>d</i>	<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
<b>SSBS</b>						
<i>At-risk</i>	27.20	5.02	43.20	11.92	1.75 <sup>a</sup>	3.86**
<i>Average</i>	53.11	10.56	58.84	10.61	.54 <sup>b</sup>	3.78***
<b>SSRS-I</b>						
<i>At-risk</i>	19.20	8.58	13.20	4.43	-.88 <sup>a</sup>	-2.12*
<i>Average</i>	8.79	3.59	7.89	1.85	-.31 <sup>c</sup>	-1.29
<b>SSRS-E</b>						
<i>At-risk</i>	10.40	6.27	9.01	7.05	-.21 <sup>c</sup>	-1.12
<i>Average</i>	8.47	3.78	8.63	4.61	-.04	-.43

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , effect size (*d*): a = large, b = medium, c = small