Effects of the Student Success Skill Program on Feelings of Connectedness, Parent-Child Relationship, and Success Skill Engagement in Middle School Students

Phyllis Hannah Bowers

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Effects of the Student Success Skill Program on Feelings of Connectedness, Parent-Child Relationship, and Success Skill Engagement in Middle School Students

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DISSERTATION
Submitted in Partial Fulfillment of the
Requirements for the Degree of
Doctorate of Philosophy
Counselor Education

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Hannah Bowers
DEDICATION

First and foremost, I dedicate this completed dissertation to my mother, Janice, for her constant and unwavering support, challenging perspectives, and unconditional love. Her unwavering support encouraged me to have faith within myself during even the bleakest moments while challenging perspectives continued to push me to better myself. My mother’s unconditional love has made me into the person that I am today. Regardless of the great academics I may meet throughout my life, she will always be the smartest and wisest person I know.

To my grandparents, Charles and Phyllis, for instilling strong values of familial relationships and pursuit of education. I am eternally grateful for the opportunity and access they have provided. I know that I am fortunate in life to have such a wonderful and supportive family. I attribute my happiness to them both.

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Effects of the Student Success Skill Program on Feelings of Connectedness, Parent-Child Relationship, and Success Skill Engagement in Middle School Students

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ABSTRACT

The author of the current study examined the effects of the Student Success Skills (SSS) program on middle school students’ perceptions of connectedness, parent-child relationship, and engagement in success skills. The sample included 41 predominantly Hispanic seventh grade students from an impoverished community in the rural southwest. The author used a paired-samples t-test to determine the effects of the SSS program on connectedness, parent-child relationship, and success skill engagement. Overall, students reported significantly decreased perceptions of connectedness and success skill engagement. A rationale for the students’ results reflects the context of current educational climate, sex factors, and ethnic considerations. Based on results and discussion, the author provides implications for the practice of school counselors and suggestions for future research.

Keywords: connectedness, parent-child relationship, school counseling, middle school
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CHAPTER 1- INTRODUCTION

Middle school students who report higher feelings of connectedness from sources of support have higher grade point averages, academic motivation, and school satisfaction (see Malecki & Demaray, 2003; Richman, Rosenfeld, & Bowen, 1998; Ryan, Stiller, & Lynch, 1994; Wang & Eccles, 2012; Wentzel, 1998). As middle school students transition from middle childhood to early adolescence, their reported feelings of connectedness decrease considerably though the sixth grade year (Niehaus, Rudasill, & Rakes, 2012) and continue to decrease throughout seventh grade and through high school (Wang & Eccles, 2012). Without intervention, this decline eventually reaches the point where students report having no adult support whatsoever (Lapan, Wells, Petersen, & McCann, 2014).

Research has indicated that students experience greater feelings of connectedness to the school when school counselors intervene to meet the students’ needs (Lapan et al., 2014). The continued decline of perceived support reveals the need for school counselors to facilitate change within the school climate by promoting feelings of connectedness between students, teachers, and parents (Brown, 1999a; Brown, 1999b; Wang, Haetel, & Walberg, 1994). Such change can be accomplished through interventions that have been shown to promote a sense of community and connectedness between students and teachers and overall impact on school climate (Lemberger & Clemens, 2012; Lemberger et al., 2015).

The Student Success Skills (SSS) program has an empirical foundation that demonstrates the program’s effective impact on students’ success (see Brigman & Campbell, 2003; Campbell & Brigman, 2005; Lemberger & Clemens, 2012; Lemberger
et al., 2015; Leon et al., 2011; Webb, Brigman, & Campbell, 2005). While the SSS program has been found to increase students’ perceptions of school connectedness (Lemberger & Clemens, 2012; Lemberger et al., 2015), knowledge of the impact of the SSS program tenets that transcend school environment and impact students’ perceptions of their parent-child relationships remains scarce. Overall, this study investigated the influence of the classroom component of the SSS program on perceptions of connectedness, parent-child relationship, and engagement in student success skills.

The Problem

In 2014, New Mexico was ranked 49th out of 50 states by The Annie E. Casey Foundation across categories of economic well-being, education, health, family and community factors that impact child welfare. Specifically, such rankings considered statistics on family and community, including the amount of children in single-parent families, the amount of children in families’ where the household head lacks a high school diploma, the number of children living in high-poverty areas, and the amount of teenage births (The Annie E. Casey Foundation, 2014). With regard to education, New Mexico ranked 49th out of 50 states in the number of children not attending preschool, the number of fourth graders not proficient in reading, the amount of eighth graders not proficient in math, and high school students who do not graduate on time (The Annie E. Casey Foundation, 2014). In 2012, the reported high school graduation rate was less than 70% (New Mexico Department of Health, 2012).

The demographics for the state of New Mexico indicate that over 47% of the population identifies as Hispanic, 2.5% identify as African American, and 10.4% identify as American Indian (U.S. Census Bureau, 2015). Such demographics must be considered
when differences among ethnic groups have been identified as a contributing factor to drop out rates of middle school students (Rumberger, 1995). Over 20% of the population of New Mexico lives below the poverty line. Considered in the context of relevant research, findings indicate that students from families of low socioeconomic status are twice as likely to drop out than students from average income households (Rumberger, 1995). However, these demographics need to be taken into perspective that over 4% of the population is composed of undocumented immigrants (Passel & Cohn, 2010).

School counselors should intervene on behalf of every student with regard to academic achievement, career, and social/emotional development (American School Counseling Association, 2012). School counselors are encouraged to adopt a comprehensive curriculum that meets the needs of all students in every capacity.

Numerous empirical studies have demonstrated the impact perceptions of connectedness have on academic achievement (see Malecki & Demaray, 2003; Richman et al., 1998; Ryan et al., 1994; Wang & Eccles, 2012; Wentzel, 1998). Such research has also indicated how perceptions of support differ among each source success (Malecki et al., 2003; Richman et al., 1998; Wang et al., 2012; Wentzel, 1998), each having an impact on the individual student in an academic and social/emotional capacity. Specifically, middle school students who report greater feelings of connectedness have higher grade point averages, academic motivation, and school satisfaction (Malecki & Demaray, 2003; Richman et al., 1998; Ryan et al., 1994; Wang & Eccles, 2012; Wentzel, 1998).

Middle school students, in particular, are encountering a physical and social/emotional transition from late childhood to early adolescence. As categorized by a
practicing school counselor, “Middle school counselors have to be prepared to work from Barbies to babies” (J. Rogers, personal communication, January 2015). Middle school students report considerable decreases in feelings of connectedness throughout their sixth grade year (Niehaus, Rudasill, & Rakes, 2012). These perceptions of connectedness continue to decline throughout seventh grade and even on throughout high school (Wang & Eccles, 2012). Without intervention, students eventually report having no adult support whatsoever (Lapan, Wells, Petersen, & McCann, 2014).

Considering research findings on the impact of connectedness and the current state of New Mexico public schools, one middle school counselor working in a rural, impoverished community, at a school with a ‘D’ letter grade administered by the state (NMPED, 2014), desperately sought to make a change within her school counseling practices. Through personal research and participation at local conferences, she found the Student Success Skills (SSS) program; an empirically supported comprehensive school counseling intervention found to increase academic achievement through skills related to student success (see Brigman & Campbell, 2003; Campbell & Brigman, 2005; Lemberger & Clemens, 2012; Lemberger et al., 2015; Leon et al., 2011; Webb et al., 2005). The school counselor adopted the program and aided in further discovery of the program’s impacts by participating in SSS empirical investigations (Lemberger et al., 2015). The intervention, as administered during the fall with a booster session prior to testing, yielded exponential gains for 7th grade students on academic achievement, executive functions, and perceptions of connectedness (Lemberger et al., 2015).

Given the climatic impact from standardized testing, there is need to investigate the impact of the SSS program as administered in full during the weeks leading up to
standardized testing. Additionally, considering the influence of supportive parental relationships on a child’s academic successes, research on whether or not the SSS intervention can transcend the school environment to impact parent-child relationships is warranted. Therefore, this study sought to investigate the influence of the classroom component of the SSS program on perceptions of connectedness, parent-child relationship, and engagement in student success skills.

The SSS Program

The SSS program is a school counselor-led intervention that focuses on building essential cognitive and social development skills that will likely lead to higher levels of academic achievement and related school successes. The program was created through a review of literature on learning and academic success conducted over the past fifty years (see Brown, 1999a; Brown, 1999b; Hattie, Briggs, & Purdie, 1996; Matsen & Coatswoth, 1998; Wang, Haertel, & Walberg, 1994; Zins, Weissberg, Wang, & Walberg, 2004). The literature review identified specific skills related to school success based in learning, social, and self-management (Brigman & Webb, 2010).

The overall program is divided into three age-appropriate segments for prevention and early intervention: Ready to Learn for grades PreK-1 (Brigman, Lane, & Lane, 2008), Ready for Success for grades 2-3 (Brigman & Webb, 2007), and the Student Success Skills for grades 4-12 (Brigman & Webb, 2010; Brigman, Campbell, & Webb, 2010). Each intervention is designed to be implemented in the classroom with a supporting small-group component for students who may struggle from the classroom intervention.
The SSS classroom component is an all-inclusive guidance curriculum for students (Brigman & Webb, 2010) as the intervention seeks to address the core areas of school counseling (ASCA, 2012). The program follows five lessons that are administered one week apart. Each lesson focuses on building skills, as seen in Table 1, related to learning and academic success. After the lessons are administered, teachers cue students for reinforcement when specific skills may be practiced and implemented in an encouraging environment (Brigman & Webb, 2010).

Table 1

| Skills for Student Success (Brigman & Webb, 2010). |
|---------------------------------|----------------------------------|-----------------------------------|
| Learning Skills                 | Social Skills                    | Self-Management Skills            |
| Goal setting / planning         | Social problem solving           | Using feedback / patterns         |
| Progress monitoring             | Listening / attending            | Positive self-talk                |
| Story structure                 | Encouragement                    | Performance / test anxiety coping skills |
| Mental practice                 | Peer coaching                    | Anger management skills           |
| Memory                          | Empathy                          | Attention / motivation focusing   |
| Kaizen                          | Kaizen                           | Life skills                       |

School counselors introduce the SSS classroom lesson with the overall goal of the program: “We are going to learn how to put the outer circle, the caring community together with the bottom of the triangle the new skills and strategies. Together they lead to increased confidence, effort and success” (Brigman & Webb, 2010, p. 4.). Concepts of the SSS program are further depicted in Figure 1.
Each intervention within the program frames student success as an achievable modality through personal skills as practiced within a supportive and caring community.

Some interventions within the SSS classroom component encourage the development of optimism to provide an overall reframe to a student’s past failure. The SSS program gives students the tools to look at failure as a flaw within the strategy being used rather than as a personal shortcoming. In session one, the school counselor encourages students by saying, “Don’t doubt your ability. Doubt your strategy. If what you are doing isn’t working, try something different” (Brigman & Webb, 2010, p. 14). This phrase, among others, is established as an integral part of the SSS program and reinforced within each lesson.

Through this intervention and others, the school counselor promotes practices of seeking support from members within the student’s system for help when a new strategy is needed. The school counselor told the students,

Don’t continue the same strategy if it hasn’t worked. If you do not know another one, ask someone who is likely to know. We need to help each other in this class to be successful. When we help each other we all win. (Brigman & Webb, 2010, p. 10)
In addition to the positive reframe and discouragement of personal blame, the SSS classroom lessons use each intervention to promote concepts of connectedness. The school counselor encourages students to seek out others to help them towards their success. Translated into practice, this may look like students seeking out one another, their siblings, or their parents for help on any task they may be struggling.

In addition to a focus on building optimism, the SSS classroom component encourages students to create small and achievable goals for themselves rather than larger unrealistic goals. This intervention is further supported through psychoeducation on the concept of Kaizen. Kaizen is a Japanese word referring to the ability to notice continuous improvement within ourselves and others, even when improvements are very small (Imai, 1986). From this intervention, students practice a hand exercise while saying, “Little by little, bit by bit, I’m improving, every day” (Brigman & Webb, 2010, p. 17). This activity is rehearsed within each classroom lesson from week one to week five. After intervention, students who may feel overwhelmed can be prompted to remember the phrase and accompanying hand gesture as a way to stay calm and refocus by approaching the task at hand through small and manageable objectives.

Congruent with concepts of Kaizen, the SSS classroom component includes interventions that target stress management, specifically in regard to test taking. This intervention instructs students to imagine a safe place and breathe slowly while counting to five (Brigman & Webb, 2010). Other self-care interventions within the classroom component focus on the connection between nutrition, fun, exercise, social support, and rest with a students’ overall energy and mood (Brigman & Webb, 2010). Charts are provided from week one, and the student can practice making small and achievable
objectives while monitoring progress throughout the five week program (Brigman & Webb, 2010). Engagement in this activity promotes the psychoeducational components of good health as well as good mental health while providing tangential experience of setting small goals and monitoring progress.

The SSS classroom component provides an overview of all skills within each session. That is, a concept introduced in week one is covered again throughout weeks two through five. By session three, students are identifying and, at times, facilitating some of the classroom activities. As students begin to master the skills promoted through the SSS program, use of skills is reinforced by the school counselor and teachers throughout the year. Conceptually, the SSS program claims to increase connections between school, family, and community systems by providing students with the skill sets to develop a community of caring and goals of student success (Brigman & Webb, 2010).

**Theoretical Constructs: Individual Psychology**

Individual Psychology, also known as Adlerian psychotherapy, is based on the assumption that individuals are not informed by facts of life, but rather by personal, subjective interpretations of those facts (Adler, 1964). These views of the world influence the individual’s thinking, feeling, willing, and acting (Adler, 1964). From this holistic perspective, an individual is able to determine his or her social interest within society, a sense of being connected with the community (Adler, 1964). Individuals encounter feelings of inferiority as they struggle to overcome displacement, feelings of not belonging, indifference, and neglect from their surrounding social atmosphere. Such experiences are thought to lead to an abandonment of social interest, characterized by
increased feelings of insecurity and inferiority and an inherent need to focus inward upon the self (Adler, 1964).

The first experience of social interest occurs as children try to find a place of significance within the family constellation (Mosak & Maniacci, 2011), a replica of the social world, encouraging competition and the tendency to protect claimed territory to maintain their place within the family (Adler, 1930; Mosak & Maniacci, 2011). Mediating facts such as birth order, number of siblings, and/or relationships with parents impact the child’s role and significance within the familial constellation (Adler, 1930; Mosak & Maniacci, 2011). A child has a natural need to fit into the family in which he or she was born (Dreikurs, 1962). If a child feels a sense of not belonging within the family group, he or she may experience increased social insecurity and inferiority. Children attempt to compensate these feelings with an inward focus on the self to rationalize for group barring (Dreikurs, 1962). The child copes through increased attempts for power to mollify such painful feelings (Dreikurs, 1962).

As children transition from middle childhood through adolescence, they experience a complete alteration of their understanding of self, the world, and their place within the world (Dinkmeyer, 1965; Dreikurs, 1962). During this transition, adolescents are in need of guidance and support from their parental systems (Dreikurs, 1962). As adolescents struggle to find their place within a new social context, parents struggle with the acceptance of the transition in which their children are currently undergoing (Dreikurs, 1962). This struggle leads to parents regarding their adolescents as children, leading to resentment, disengagement, and eventual rebellion (Dreikurs, 1962). Conceptually, poor parenting practices lead to rebellion and antagonism, first directed
towards the parents and family, then expanding into the child’s social world (Adler, 1930; Dreikurs, 1962).

Adler conceptualized the school environment as a replication of a child’s familial system (Adler, 1962; Balson, 1988). Children associate adults within the school systems as authority figures, and may treat them as they would treat a parent (Adler, 1930; Balson, 1988). During middle school, the transitioning adolescent may express similar struggles experienced with parents such as rebellion, disengagement, and resentment towards their teachers, school administrators, and even the school counselor. Just like parents, teachers and administrators may struggle with such behaviors and subsequently begin to treat the transitioning child as more juvenile than their identified self. This behavior only perpetuates negative behaviors, encouraging the transitioning child to feel more and more isolated and misunderstood within his or her social system (Balson, 1988).

The school environment is an ideal setting for children to practice skills related to increasing social interest (Adler, 1964; Balson, 1988; Brigman et al., 2011; Spiel & Birnbaum, 1930). Schools are a social construct separate from the family, providing children with the opportunity to practice finding their place within an unfamiliar environment (Adler, 1964; Balson, 1988; Brigman et al., 2011). Since this environment is unfamiliar, children often assume the roles in which they are comfortable, replicating attitudes and behaviors exhibited at home. Behaviors such as disengagement, resentment, and rebellion are detrimental towards academic success, leading to an increased perception of inferiority, and an overall outcome of feeling displaced within their social context (Adler, 1964; Balson, 1988; Spiel & Birnbaum, 1930). To decrease these
problematic behaviors, children can participate in interventions that increase feelings of connectedness, which inherently increase social interest (Lemberger & Krauss, 2013).

The skills with the SSS program, as seen in Table 1, are comparable to the tenets within Individual Psychotherapy (Brigman et al., 2011). Through enhanced social skills increasing feelings of connectedness and related social interest, students have increased capabilities to form relationships with their peers and teachers, as well as to establish a place within the school (Brigman et al., 2011; Lemberger & Krauss, 2013). Such a phenomenon has been empirically supported through research investigating the impact of the SSS program on feelings of school connectedness (Lemberger & Clemens, 2012; Lemberger et al., 2015). Consistent with concepts of the school systems replicating the child’s family, as children enhance their ability to connect with others within their school environment, such abilities could transfer to relationships at home. As students are better able to connect with members within their school, they could experience increased perceptions of connectedness to their parents.

Overall, the foundational tenets of Individual Psychology conceptualize the therapeutic experience as a process of re-education for the individual as a whole (Mosak & Maniacci, 2011; Spiel & Birnbaum, 1930). The goal of engaging in counseling is to create social interest by decreasing feelings of inferiority (Adler, 1964; Brigman et al., 2011). By changing a person’s views of self and goals, motivational change for current beliefs and goals can occur, which will encourage the development of social interest and transformation towards becoming a contributing person to society (Mosak & Maniacci, 2011). Conceptually, the SSS program can increase social interest of students by building
skills that enhance success, securing a place within the community and at home through feelings of connectedness.

**Purpose of the Study**

This study measured the effects of the classroom component of the SSS program with regard to the relationship between engagement in school success skills, students’ feelings of connectedness, and relationships between students and their parents. Considering theoretical postulates from individual psychology, the study identified that skills learned within the SSS program transcend the school environment, impacting the student’s relationships with his or her parents. In addition to the study’s goals of identifying effects between variables, this research endeavor provided services to an underserved population faced with a high-stakes testing environment and continued to gather evidence on the effects of the intervention within the rural southwest.

**Research Questions**

Research Question 1. Does the SSS classroom intervention influence students’ perception of connectedness to school?

Research Question 2. Does the SSS classroom intervention influence students’ perception of the parent-child relationship?

Research Question 3. Does the SSS classroom intervention influence students’ engagement of student success skills?

Research Question 4. Does classroom membership, sex, or ethnicity impact students’ perceptions of connectedness to school?

Research Question 5. Does classroom membership, sex, or ethnicity impact students’ perceptions of the parent-child relationship?
Research Question 6. Does classroom membership, sex, or ethnicity impact students’ perceptions of engagement of student success skills?

**Methodological Approach**

The study used a quasi-experimental single subject pretest-posttest research design as all participants were recipients of the SSS classroom component. Quantitative data were collected in the pretest-posttest format from participating students one week before and one week after the intervention was implemented. Pretest data were analyzed with a Mann-Whitney U and Kruskal-Wallis Test to identify possible differences between groups within the single treatment group by class period, sex, and ethnicity. A paired-samples t-test was then used to determine difference between pretest and posttest scores. Follow-up analysis consisted of the Mann-Whitney U and Kruskal-Wallis Test to ensure any identified within group differences based on class period, sex, and ethnicity.

**Limitations of the Study**

The overall design of a one-group pretest-posttest design offers limitations. A typical consequence of using only pretest-posttest data collection procedures is the possibility of regression or maturation (Cook & Campbell, 1979). While this study investigated overall treatment effects of the SSS intervention, other factors may contribute to results, increasing the occurrence of type I or type II errors. Within one-group pretest-posttest designs, posttest outcomes can be affected by knowledge gained during pretesting, altering subsequent performance throughout the intervention period (Cook & Campbell, 1979). While the instruments used are valid and reliable, results are subjective to student self-reports. Conceptualization of the instrument content can be
altered by threats to validity such as regression, maturation, and history (Cook & Campbell, 1979).

Additional limitations reflect the nature of intervention work within a school setting. There was a student attrition of $n = 3$. Obtaining a large sample size also proved challenging as it was difficult for students to return signed consent forms to the school due to lack of support from the classroom teacher. Support for the SSS intervention from administration within the school was extremely limited. While teachers encouraged the school counselor to administer the classroom guidance, transitions within school leadership increased difficulties in disseminating information about the study to children’s parents. Timing of the intervention was intentional to coincide with the commencement of state-wide standardized testing. Thus, community and school climate regarding testing potentially contributed to study outcomes.

**Conclusion**

The purpose of this study was to identify if skills learned and utilized at school through the SSS intervention transferred into outside environments. Consistent with the ideologies of Individual Psychotherapy, there is a demonstrated need to identify if and how interventions administered to children at school can transcend the school environment and impact the parent-child relationship. The following chapter contains support for the SSS program, the role of support, and the dynamic nature of the parent-child relationship on the middle school student.
CHAPTER 2- LITERATURE REVIEW

The SSS program benefits from years of research to build its current empirical foundation (see Brigman & Campbell, 2003; Campbell & Brigman, 2005; Lemberger & Clemens, 2012; Lemberger et al., 2015; Leon et al., 2011; Webb et al., 2005). In order to better understand the constructs of the SSS program, it is essential to discuss the literature supporting the SSS program to reveal the importance of social support and feelings of connectedness from various sources as it relates to middle school students.

Development of the SSS program

Creation of the SSS program emerged from multiple investigations of education throughout the past fifty years (Brown, 1999a; Brown, 1999b; Hattie, Briggs, & Purdie, 1996; Matsen & Coatsworth, 1998; Wang, Haertel, & Walberg, 1994; Zins, Weissberg, Wang, & Walberg, 2004). Each reviewed meta-analysis sought to identify factors that enhance student learning outcomes. From this research, implications for future practices were made, which, in turn, educated the creation of the SSS program.

Fifty-one studies were identified to lead to enhancements of student learning through a focus on task-related skills, self-management of learning, or affective components such as motivation and self-concept (Hattie et al., 1996). The authors categorized studies based on strength of the analysis, research design implemented, and resulting effect size (Hattie et al., 1996). Programs focusing on attribution, memory, or structural aids had greater effects than programs promoting change in motivation and study skills (Hattie et al., 1996). Throughout each study, findings indicated that students who participated in study skills interventions reported greatest change in attitude, greater
fondness of their teachers and amity towards participation in reaching educational goals (Hattie et al., 1996).

In a review of 11,000 statistical findings, Wang et al. (1994) found influences that impact student learning, including student aptitude, classroom instruction and climate, context, program design, school organization, and state and district characteristics. Findings indicated that metacognitive processes, cognitive processes, social and behavioral attributes, and motivational and affective attributes have the greatest impact on learning (Wang et al., 1994). Additional influences on student learning include positive climates that promoted constructive quality of social interactions between teachers and students, time teachers spent on specific topics, and home support and peer group support (Wang et al., 1994). Program design had a weak impact on school learning while school organization, specifically school culture, was moderately influential (Wang et al., 1994). Least influential categories consisted of those within the state and district characteristics (Wang et al., 1994). Implications from the yielded results suggested the need for policy and practices to be grounded in the identified factors that have greater influences on student learning (Wang et al., 1994).

Similar to findings above, an investigation of interventions that promote positive outcomes for at risk children indicated that successful children have quality parent-child relationships, cognition, and self-regulation (Masten & Coatsworth, 1998). Implications for future research call for the need to develop interventions and policies that promote the development of parent-child relationships and increase cognitive abilities and self-regulation skills (Masten & Coatsworth, 1998).
Brown (1999a) discussed the need for school reforms and the role school counselors can play in that process based on implications within the relevant research. While specific direct interventions are identified, the overall goal is a foundational change within the overall school climate (Brown, 1999a). Brown (1999b) examined the importance of the school climate for both teachers and students which requires intervening on behalf of the student and the teacher to promote encouraging communication within curriculum and achievement standards. Successful interventions include time management training, classroom guidance units on test-taking skills, achievement motivation groups, and study skills groups (Brown, 1999a). Additional recommendations include incorporating parents into the school climate (Brown, 1999a, 1999b). Brown (1999a, 1999b) acknowledged that changes within the school alone are not enough without the support from the family system; instead, schools need to take the initiative in reaching out to parents through parent education courses and increase parent feeling of connectedness to the school through advocacy services and increased communication.

In implementing interventions to affect changes in the identified areas, Brown (1999b) urged the creation of innovative interventions that are culturally and developmentally appropriate for the target population. Recommendations for practice include conducting needs assessments and creating long- and short-term measurable and achievable goals based on meeting those needs (Brown, 1999b). Overall, Brown (1999a) called for school counselors to implement interventions that can directly improve school climate through intervention with the students and their parents. Through recommendations drawn from meta-analytic reviews on educational research (Brown,
1999a, 1999b; Hattie et al., 1996; Matsen & Coatsworth, 1998; Wang et al., 1994), the creators of the SSS program identified key components of learning skills, social skills, and self-management skills as depicted in table 1.1 (Brigman & Webb, 2010). A guidance curriculum was then developed, compiling interventions that focus on the identified skills and verified for efficacy.

**Intervention Components within the SSS Program**

The SSS program is composed of multiple intervention strategies that target skills identified to enhance student success. Examples of a few of the SSS interventions include building optimism, physical health, Kaizen and goal setting, and mindfulness techniques. Such interventions are empirically supported with consideration to education and middle school students.

Mindfulness techniques function within psychotherapy as a modality to reduce symptoms associated with multiple mental health disorders (Brown & Ryan, 2010; Grossman et al., 2004). Regarding education, Benson et al. (2000) identified the effects of a relaxation response curriculum on academic achievement outcomes such as grade point average, work habits, cooperation, and attendance in middle school students. The study noted the use of relaxation interventions as a way to improve academic achievement (Benson et al., 2000). Findings from this study also indicate the positive impact a relaxation intervention has on a culturally diverse and lower socioeconomic middle school (Benson et al., 2000). In addition to improvements in academic achievement, Benson et al. noted increases in students’ communication amongst one another and improved relationships between students and teachers, indicating improvements to school connectedness. The SSS classroom intervention uses
mindfulness techniques as related to relaxation and stress reduction during test taking. The psychoeducational intervention includes breathing exercises that highlight physical sensation of breathing and encouraged feelings of control over the stress-inducing task (Brigman & Webb, 2010). Mindfulness interventions within the SSS program are enhanced through psychoeducational components relating to physical activity, nutrition, and the overall impact on energy and mood (Brigman & Webb, 2010).

Through a quasi-experimental investigation on the impact of time spent in physical education (PE), Tremarche, Robinson, and Graham (2007) found that fourth grade students who had more hours of PE per week scored higher on standardized assessments than those students who received fewer hours in PE per week. A study by Tremblay, Inman, and Willms (2000) identified the relationship between reported levels of physical activity, body-mass index, self-esteem and academic achievement scores while controlling for possible confounding variables such as sex, family structure, and socioeconomic status in sixth grade students. Findings indicated that students with lower body mass index and higher reports of physical activity had considerably higher self-esteem (Tremblay et al., 2000). Moreover, the researchers found that physical activity was indirectly associated with academic achievement, suggesting that more physically active students exhibit improved classroom behaviors that enhance learning (Tremblay et al., 2000).

Such findings from studies on the impact of physical education likewise appear in an investigation of third and fifth grade students by Castelli et al. (2007), who identified a positive relationship between physical fitness and academic achievement and an inverse relationship between body mass index and academic achievement. Within the SSS
classroom component, interventions help students measure their nutrition, physical activity, and other components of physical health to overall energy and mood (Brigman & Webb, 2010). This intervention ties in psychoeducational component to encourage positive physical health. Additionally, the intervention serves as a tool to monitor progress and establish small, manageable goals, also known as Kaizen.

Within the SSS program, Kaizen encourages students to view the smaller achievements made every day rather than focus on the daunting larger goal (Brigman & Webb, 2010). The concept of Kaizen has been an empirically supported intervention within the business industry (Glover et al., 2011; Stone, 2010; Szklo, Maia, & Qassim, 1997) and is a frequently investigated concept in education (Blasdale, 2004; Zimmerman, 1991). In looking at the practice of goal setting among middle school students, Pajares, Britner, and Valiante (2000) identified a relationship between achievement goals and motivation constructs within subjects of science and writing. Results of their study indicated that students with performance approach goals had greater self-efficacy and self-regulation with regard to writing and science self-concept (Pajares et al., 2000). The process of setting goals and working towards goal achievement is a component of executive functioning, which is related to increased academic achievement (Jacobson, Willford, & Pianta, 2001; Sesma et al., 2009). Empirical research on the SSS program further investigates the impact SSS has on executive functioning with middle school students (Lemberger & Clemens, 2012; Lemberger et al., 2015).

**Empirical Research on the SSS Program**

Before the creation of the actual SSS manuals, Brigman et al. (1999) investigated the effectiveness of strategies used to teach listening comprehension, attending skills, and
social skills with the Ready to Learn (RTL) program on inner-city preschool children. Results indicated a significant difference between children who had the RTL curriculum and the control group (Brigman et al., 1999). Since this study utilized a pretest, posttest, and post-posttest design, the results revealed the importance of social and learning skills on long-term success and how such skills can be taught to preschool children. Additionally, findings from this study also indicated that teachers are capable of teaching skills for student success within a traditional classroom setting (Brigman et al., 1999).

In a later study, the RTL program was administered to kindergarten students to investigate effects on prerequisite learning skill development (Brigman & Webb, 2003). Students in RTL classrooms exhibited greater improvements in listening comprehension and behavior than those students in non-RTL classrooms; thus, an entire classroom of students can learn skills that lead to academic achievement when administered by a teacher (Brigman & Webb, 2003).

Research findings from the RTL program informed the creation of the SSS program, deriving from methods taught by classroom teachers to a guidance curriculum to be implemented by school counselors. Brigman and Campbell (2003) investigated the impact of counselor-led interventions through small groups and in the classroom on cognitive, social, and self-management skills with students in grades five, six, eight, and nine. Findings indicated that group counseling and classroom guidance interventions had a positive impact on skills associated with student success (Brigman & Campbell, 2003). In alignment with the ASCA national model, this study was also fundamental in identifying how school counselors can use research to support the positive outcomes of counselor lead interventions (Brigman & Campbell, 2003).
In looking at the effectiveness on just the small group component of the SSS program, Campbell and Brigman (2005) found that low performing students in elementary and middle school saw increases in skills identified to improve school success. Findings from this study further support how increases in social, cognitive, and self-management skills can be translated into academic achievement (Campbell & Brigman, 2005). Additional findings support school counselor-led small groups, particularly when using the SSS model to provide structure and support (Campbell & Brigman, 2005). Results from a replica study were consistent with previous findings (Brigman & Campbell, 2003; Campbell & Brigman, 2005), indicating reliability for the SSS small group component on increasing skills related to academic achievement (Webb, Brigman, & Campbell, 2005).

A meta-analysis investigating the empirical research supporting the SSS program (Brigman & Campbell, 2003; Campbell & Brigman, 2005; Webb et al., 2005) was conducted to investigate the overall impact on student achievement on standardized tests (Villares, Grain, Brigman, Webb, & Peluso, 2012). Results from this meta-analysis indicated an overall effect size of the SSS intention as +.29. The effect size regarding the impact of the SSS on math achievement is +.41 and for reading achievement is +.17 (Villares et al., 2012). The meta-analysis further demonstrates the impact of the SSS intervention on the ability to effect skills that directly impact academic achievement.

In a National Panel for School Counseling Evidence Based Practice, the SSS program’s related research (Brigman & Campbell, 2003; Campbell & Brigman, 2005; Webb et al., 2005) was evaluated by the Center for School Counseling Outcome Research (Carey, Dimmitt, Hatch, Lapan, & Whiston, 2008). Findings from this
evaluation indicated the program’s strong foundation of research. Recommendations for future researched called for administration on a more diverse student population and the use of psychometric assessments to measure metacognitive, social, and self-management skills (Carey et al., 2008). These recommendations were taken into consideration as seen in the second wave of outcome research on the SSS program (Lemberger & Clemens, 2012; Lemberger et al., 2015; Leon, Villares, Brigman, Webb, & Peluso, 2011).

Given the recommendations of the Center for School Counseling Outcome Research (Carey et al., 2008), further research on the efficacy of the SSS program focused on diverse populations with psychometric assessments (Lemberger & Clemens, 2012; Lemberger et al., 2015; Leon et al., 2011). Effects of the Spanish translated classroom component of the SSS program as administered by a bilingual school counselor was investigated with Latina/Latino students in grades four and five (Leon et al., 2011). Findings indicated that the Spanish translated SSS program has positive effects on academic achievement for Latina/Latino students (Leon et al., 2011).

When the small group component was administered to inner-city African American students in grades four and five, findings indicated moderate increases in feelings of connectedness to people in their school and significant increases in their metacognitions (Lemberger & Clemens, 2012). Research results demonstrated the importance of feelings of school connectedness and how such feelings impact school performance (Lemberger & Clemens, 2012). Additionally, the study indicated the importance of connecting cognitive functions, self-regulation, and the positive effects on academic achievement with low income youth (Lemberger & Clemens, 2012). Through this quasi-experimental study, connections were made between the effects of SSS on
academic achievement through advances in metacognitive abilities and increases in feelings of connectedness (Lemberger & Clemens, 2012). Given these connections, recommendations for future research called for validating findings by specifically investigating gains in academic achievement, metacognitive skills, and feelings of connectedness.

Research investigating the impact of the classroom component of the SSS program in regards to executive functioning, feelings of connectedness, and academic achievement continued with predominately Hispanic and low-income seventh grade students in the rural southwest (Lemberger et al., 2015). Results from this study exceeded results from past studies (Brigman & Campbell, 2003; Campbell & Brigman, 2005; Leon et al., 2011; Webb et al., 2005) pertaining to academic achievement, feelings of connectedness, and executive functioning (Lemberger et al., 2015). Findings from this study continue to reaffirm support for the SSS program on its positive effects on skills that directly relate to academic achievement.

More recent outcomes of the SSS program have reaffirmed the relationship between feelings of school connectedness and academic achievement and the degree to which SSS impacts these constructs (Lemberger & Clemens, 2012; Lemberger et al., 2015). The concept of school connectedness is defined as students’ perceptions of support from people within their environments (McNeely, Nonnemaker, & Blum, 2002). The following research will further demonstrate the value and impact on students and their perceptions of support as well as the immense need to intervene with middle school students.

**Connectedness, Sources of Support, and School Success**
Student success is not dependent on one type of support from one source; rather, research findings indicate that students need different types of support from different sources (Malecki & Demaray, 2003; Wang & Eccles, 2012; Wentzel, 1998). As identified within Individual Psychotherapy, feeling connections to the community and finding a place is essential to the concept of social interest (Mosak & Maniaci, 2011). Through the combination of differing supports, students are provided with the means to connect and achieve success (Malecki & Demaray, 2003; Ryan et al., 1994; Wang & Eccles, 2012; Wentzel, 1998). With consideration to middle school students specifically, the following research has supported the consensus that adolescents need a multitude of differing supports within their lives to achieve optimal success.

To identify the effects social relationships have on adaptive functioning, Ryan et al. (1994) investigated representations of relationships to parents, teachers, and friends with 606 early adolescents. Results identified that students who reported higher quality parent and teacher relationship have higher motivation in school due to these adult supports (Ryan et al., 1994). Students reporting a lack of any form of social support were more likely to have poor school adjustment and deemed at risk for school failure (Ryan et al., 1994).

In a similar study of social support for adolescents at risk for school failure, Richman, Rosenfeld, and Bowen (1998) identified types and sources of social support associated with positive school outcomes as measured by perception of school satisfaction. Findings indicated that, for middle school students, school satisfaction was impacted by perceived emotional support, emotional challenge support, and reality confirmation support (Richman et al., 1998). These types of supports were found to be
provided by parents, teachers, and peers, each source providing a different type of support that affects overall school satisfaction (Richman et al., 1998).

When looking at relationship between 167 middle school students and their parents, teachers, and peers, Wentzel (1998) identified the impact of different social supports within motivation on school-related goals and academic achievement, specifically through school-related interest, class-related interest, academic goal orientations, and social goal pursuit through various assessments (Wentzel, 1998). Findings indicated that perceived parental support predicted academic goal orientations while support from teachers predicted interest in classroom activities (Wentzel, 1998). Perceived support from peers was the only form of support related to social goal pursuit (Wentzel, 1998). Conclusions from this study validated the notion that various forms of support impact differing forms of motivation and a successful student engages in supportive relationships with parents, teachers, and peers (Wentzel, 1998).

A study by Malecki and Demaray (2003) determined that perceived support from middle school students differs in source, type, and predicted outcomes. Specifically, findings indicated that students rely on emotional and informational support from parents, informational support from teachers, and appraisal support from classmates and close friends (Malecki & Demaray, 2003). In a more recent study, Wang and Eccles (2012) conducted a longitudinal study on students as they progressed from middle school to high school, finding that social support varies in significance and impact upon a student’s life (Malecki & Demaray, 2003; Richman et al., 1998; Wang & Eccles, 2012; Wentzel, 1998). Sources of social support such as peers, parents, and teachers had no interaction
with one another, reinforcing the notion that each source of support independently impacts students’ engagement with school (Wang & Eccles, 2012).

Developmentally, middle school students are at the beginning of their adolescent years. Originally, developmental processes suggest that as children become older, so do their autonomous needs (Eccles et al., 1993; Steinberg & Morris, 2001). Adolescents value their peer relationships and disengage from parents for a period to build such autonomy (Eccles et al., 1993; Steinberg & Morris, 2001). However, these developmental statements run counter to the literature on sources of social support. Middle school students perceive the relationship with their parents as important for emotional support and informational support (Malecki & Demaray, 2003; Richman et al., 1998; Wang & Eccles, 2012; Wentzel, 1998). Rather than valuing relationships with peers alone, adolescents, according to research, find value in meaningful relationships with teachers and other significant adults as a modality of building autonomy (Lapan, Wells, Petersen, & McCann, 2014; Malecki & Demaray, 2003). While these sources of support maintain their importance, students report that perceptions of support decline throughout their advancement into high school (Malecki & Demaray, 2003; Niehaus et al., 2012; Wang & Eccles, 2012; Wentzel, 1998). Without a reliable intervention to increase feelings of connectedness, students will likely continue to feel declining support and become more susceptible high-risk behaviors.

The Parent-Child Relationship and Student Success

The parent-child relationship is a unique and special form of support, which, during early adolescence, transitions from one between adult and child to one between adult and adolescent. With this transition comes an increase in conflict and a decrease in
reported closeness between parent and adolescent (Steinberg & Morris, 2001). In terms of Individual Psychotherapy principles, the adolescent is transitioning outside of the family constellation, needing to form social interest with the external world (Adler, 1964). Such transitions can create an increase of incongruences as the child’s view of self from his or her place within the family is inconsistent with the position in other contexts, such as school or social circle (Dreikurs, 1962). The adolescent, who is not fully an adult, is still in need of the security that comes from maintaining his or her place within the family constellation (Dreikurs, 1962). The following research demonstrates the value of the parent-child relationship for middle school students.

Through familial reports and observations, Bronstein and colleagues (1996) investigated the impact parenting behaviors had on the adjustment of students throughout middle schools. Findings indicated that supportive and aware parenting was related to increases in positive self-concept, higher academic achievement, greater social relationships with peers, and lower incidents of psychological or behavioral problems (Bronstein et al., 1996). Similar results from a study on teenage males’ perceptions of support concluded that parents have a unique and powerful role on adolescents (Dishion, Nelson, & Bullock, 2004). Observed outcomes suggested that less positive parenting, decreased monitoring, and poor parent-child relationship was associated with antisocial behavior in adolescent boys (Dishion et al., 2004). Such decreased monitoring and parent-child relationship gives the child the space to engage in high-risk behaviors (Dishion et al., 2004).

Fan and Williams (2010) examined the relationship between parental involvement and academic motivation in math and English, determining that parents’ educational
goals for their children in addition to school-initiated contact on benign issues had positive effects on students’ perceived academic motivation (Fan & Williams, 2010). The importance of the parent-child relationship on school-related engagement is further promoted through similar findings of an investigation of the relationship between parents and teachers with a predominantly Latino population of middle school students (Murray, 2009). Variables indicating the strength of the parental relationship suggested a significant influence on student perceptions of engagement, school competence, and academic achievement in reading (Murray, 2009). Furthermore, a meta-analytic study investigating 50 studies validated the conceptualization that parental involvement is positively associated with student achievement (Hill & Tyson, 2009). A positive parent-child relationship is essential for middle school students to achieve optimal success.

**The Parent-Child Relationship and Communication**

With regard to the development of the parent-child relationship during middle childhood and adolescence, Collins and Russell (1991) identified ways in which these developing relationships differ from mother to father, recognizing correlations between parent personality traits and childrearing practices as opposed to qualities of the dyadic relationship when considering child outcomes. Such conclusions support recommendations for measures of the parent-child relationship to expand beyond perceptions of the parent-child relationship (Collins & Russell, 1991).

Based on theoretical propositions of Individual Psychology, communication is a modality used to conform into a social group, a determinant factor of social interest (Dreikurs, 1962). Empirically, communication patterns have been identified as a crucial element in the development and maintenance of interpersonal relationships (Cahn, 1992;
Koerner & Fitzpatrick, 1997). As children transition into adolescents, such developmental changes have an impact on the previously established communication patterns between adolescents and their parents. Sillars, Koerner, and Fitzpatrick (2005) investigated the relationship between communication patterns and understanding within 50 parent-adolescent triads, determining that perceptions of higher communicative orientation were positively associated with parental understanding. Similarly, higher reports of conformity were found to have a negative association with parental understanding (Sillars et al., 2005).

In investigating the communication patterns that reflect conflict resolution skills between parents and adolescents, Koerner and Fitzpatrick (1997) identified ways in which family type is mediated by aspects of conforming and conversing that influence modalities of conflict resolution. Specifically, families that reported high in conformity orientation were more likely to engage in conflict avoidance (Koerner & Fitzpatrick, 1997). Families with highly reported conversion orientation were found to have a negative correlation with conflict avoidance (Koerner & Fitzpatrick, 1997). Coping strategies for conflict vary based on family type but are founded on the overall need to maintain social support within the family (Koerner & Fitzpatrick, 1997).

Communication patterns have been shown to represent underlying characteristics that influence interpersonal relationship skills (Keaten & Kelly, 2000). For example, a lack of communication skills may indicate lack of self-confidence or discomfort within a social environment (Keaten & Kelly, 2000). Kelly and colleagues (2002) further investigated the development of this phenomenon regarding the influence of communication within the family environment, finding that individuals with low
communication skills were more likely to perceive low communication and conformity within their family of origin. Such results suggest multiple implications, including that communication patterns are learned through modeling of social interactions (Kelly et al., 2002). In this case, children learn how to communicate through observation of their parents. Consequently, recommendations encourage further skill communication development to occur within the school setting, calling for a need of interventions that can improve social skills within the home and school environment (Kelly et al., 2002).

The Decline of Perceived Support

As identified within the studies above, perceptions of support decline from entry into middle school throughout high school (Malecki & Demaray, 2003; Wang & Eccles, 2012; Wentzel, 1998). Lack of connectedness to school or home has been shown to lead to increases in high-risk behaviors and eventual school failure (Richman et al., 1998; Ryan et al., 1994). To meet the need for research investigating connectedness with at risk populations, Niehaus et al. (2012) conducted a longitudinal study on school connectedness and academic outcomes among sixth grade students. Findings from this study indicated that student’s perceptions of social support decline throughout the sixth grade year (Niehaus et al., 2012). A correlating relationship was found between reported perceptions of school connectedness and grade point average; students reporting greater feelings of school connectedness had higher grades (Niehaus et al., 2012). Conclusively, these findings are consistent with other studies on connectedness with middle school students (e.g., Malecki & Demaray, 2003; Wang & Eccles, 2012; Wentzel, 1998).

In looking at a large sample of urban seventh through twelfth grade students, Lapan et al. (2014) identified ways in which school counseling services met students’
needs and overall enhanced perceptions of school connectedness. Notably, as school counselors respond directly to students’ needs, there is the formulation of a personal relationship (Lapan et al., 2014). This relationship is particularly important as findings from this study and previous studies have shown that students feel less supported (Malecki & Demaray, 2003; Niehaus et al., 2012; Wang & Eccles, 2012; Wentzel, 1998), to the point where they report not having a single adult from whom they can receive support (Lapan et al., 2014). Other findings have indicated that school counselor response was a mediating factor between risk factors and students’ reported feelings of safety and overall perceived connectedness (Lapan et al., 2014). Based on the data from this study, Lapan et al. (2014) recommended school counselor implement practices that can increase feelings of school connectedness, particularly for at-risk populations.

**Sex and Ethnicity Differences among Middle School Students**

Investigation of differences between sexes indicated that males perceived higher parental strictness than females while females perceived greater parental monitoring than males in parent-child relationships (Fuligni & Eccles, 1993). Additionally, Fuligni and Eccles (1993) found that females preferred to discuss problems with friends and parents rather than just parents where as males disregarded parental influences for their friends. Such findings further suggest that females perceive supportive relationships with close friends (Fuligni & Eccles, 1993). Females have also been found to report an increased intimacy within their peer relationships than males. Research findings have concluded that female students who report increased intimacy within their peer relationships also are more likely to have preceived increased supportive relationship with their parents (Kerns, Klepac, & Cole, 1996).
Differences between sex have been identified within multiple studies of academic motivation (e.g., Meece et al., 2006; Pajares & Valiante, 2001). Pajares and Valiante (2001) sought to identify whether sex differences in academic achievement were a product of sex or of stereotypical beliefs. The researchers observed that increased performance-related goals indicated increased self-efficacy and self-concept beliefs for males and not for females (Pajares & Valiante, 2001). Such findings are supported by a review of empirical research on academic motivation factors suggesting that males tend to be more positive towards achievement beliefs in mathematics, science, and sports while females had more positive achievement beliefs related to language arts and reading (Meece et al., 2006). These patterns of perceptions tend to be formed early and reinforced through scholastic and social interactions (Meece et al., 2006).

Consistent with theory of Individual Psychotherapy, parenting practices are determined to be replications of one’s own parenting experiences; that is, parents utilize methods of parenting that are similar to how they themselves were parented as children (Adler, 1964; Dreikurs, 1962; Spiel & Birnbaum, 1930). As parenting techniques can be considered a direct reflection of cultural practices passed down from generation to generation, to investigate such cultural differences between ethnicities, Dixon, Graber, and Brooks-Gunn (2008) identified variations within parent-child conflicts between African American, European American, and Latina children and their parents. Results indicated a significant difference as Latina and African American females perceived more respect for their mothers than European American females, while intensity of conflict did not differ between ethnic groups (Dixon et al., 2008). Additionally, African American and Latina mothers scored significantly higher on restrictive behaviors than
European American mothers (Dixon et al., 2008). Through an investigation of parent-child relationships between Mexican American and European American early adolescents, Carlo et al. (2011) identified minimal differences of prosocial behaviors, but otherwise concluded that parenting was similar across the two groups.

Ethnic differences have typically been a neglected area of research within academic motivation (Meece et al., 2006). Rumberger (1995) investigated influencing factors of drop-out for middle school students. In addition to significant differences identified among ethnic groups, other contributing factors include family background and socioeconomic status, as students from low socioeconomic families were twice as likely to drop out than students from average socioeconomic families (Rumberger, 1995). While dropout rates may be influenced by family of origin, other factors that contribute to academic achievement have been found to differ among ethnic groups (Usher & Pajares, 2006). Usher and Pajares (2006) investigated the relationship between academic and self-regulatory efficacy beliefs for new middle school students, determining that mastery experience and psychological state are predictors of academic self-regulatory self-efficacy for White students while social persuasions were more likely to predict self-efficacy for African American students (Usher & Pajares, 2006).

Given the perceived and actual differences between sex and ethnic groups, it is imperative that school counseling interventions effectively meet the needs of all populations. As encouraged within the ASCA National Model (ASCA, 2012), comprehensive guidance curriculums should meet the needs of all students, not just a sample within the population. Given the sex and ethnic considerations raised by the
relevant literature, analysis for this study will take such variables into consideration when identifying intervention results.

**Conclusion**

As social support has been positively correlated with academic success, it is vital that interventions administered within the school impact feelings of connectedness with the parent, teacher, and among students. While research on the SSS program has looked specifically at the impact on feelings of school connectedness (Lemberger & Clemens, 2012; Lemberger et al., 2015), social support is experienced in a multitude of settings and subsequently impacts various relationships (see Malecki et al., 2003; Richman et al., 1998; Ryan et al., 1994; Wang et al., 2012; Wentzel, 1998). The impact such relationships have on a student’s wellbeing warrants the current investigation of the modalities impacting the parent-child relationships through perceptions of communication.

Constructs of Individual Psychotherapy encourage the development of a positive parent-child relationship specifically during a challenging transition period for middle school students. Considered with the overwhelming empirical support for the SSS program (see Brigman & Campbell, 2003; Campbell & Brigman, 2005; Lemberger & Clemens, 2012; Lemberger et al., 2015; Leon et al., 2011; Webb et al., 2005), there is a warranted need to investigate whether the SSS program can transcend the school environment to impact perceptions of school connectedness and parent-child relationships through engagement in school success skills.
CHAPTER 3 – METHODOLOGY

Within the methodology chapter, the researcher addresses various research questions and introduces a series of reliable and valid assessments pertaining to the identified constructs (see Carey, Brigman, Webb, Villares, & Harrington, 2014; Malecki, Demaray, & Elliot, 2004; Ritchie & Fitzpatrick, 1990). This chapter includes a detailed depiction of the research design, sampling procedures, and data collection. Discussion and rationalization of modalities of analysis, the Kruskal-Wallis Test and a paired-samples t-test are provided.

Research Design and Methodology

The current study’s research design is quantitative one-group pretest-posttest design. The study is deemed quasi-experimental as there is no randomization for treatment group participation and no control group (Cook & Campbell, 1979). The singular treatment group consists of students who received the SSS classroom intervention. Dependent variable constructs of feelings of connectedness, parent-child relationship, and engagement of success skill behaviors was collected through pretest-posttest administration of reliable and valid assessments to investigate the influence of the independent variable, the SSS classroom intervention.

A research design is considered valid if it measures what it intended to measure (Cook & Campbell, 1979). For the current study, the goal was to investigate the effects of the independent variable, the SSS classroom intervention, on the following dependent variables: feelings of connectedness, parent-child relationship, and engagement in success skill. Each research question was constructed to specifically identify the influence of the independent variable on the dependent variable. Valid and reliable
assessments were used to ensure that each research question is related to the dependent variables. Each assessment has operationally defined the phenomenon and constructed questions demonstrated to accurately measure said phenomenon (see Carey et al., 2014; Malecki et al., 2004; Ritchie & Fitzpatrick, 1990). To determine overall treatment effect, a paired-samples $t$-test analyzed pretest and posttest data as matched for each individual. Results indicate significant and non-significant mean differences at an alpha level of .05.

In an attempt to identify possible confounding variables, additional research questions will clarify the effect of the independent variable on the dependent variable. Identified psychometric properties for each assessment provide information on how each construct may yield different results for differing groups, such as sex and ethnicity and classroom membership (Malecki et al., 2004; Ritchie & Fitzpatrick, 1990). A Kruskal-Wallis Test analyzed pretest and posttest data separately to identify the possible influence confounding variables had on treatment outcomes.

Theoretically, the SSS program was constructed to be employed to transcend relationships within the school to familial systems at home. Thus far, empirical support for the SSS program has singularly focused on interactions within the school system (see Brigman & Campbell, 2003; Campbell & Brigman, 2005; Lemberger & Clemens, 2012; Lemberger et al., 2015; Leon et al., 2011; Webb et al., 2005). Based on a theory of change, implementation and investigation of the effects of the SSS program needs to expand beyond the school to test one of the program’s underlying assumptions.

As students learn success skills within the classroom, they obtain the skills necessary to enhance social relationships, leading to increased perceptions of connectedness to teachers, students, and school administration. Combined with tenets of
Individual Psychology, these skills learned within the school theoretically transcend to the family as the school system mimics familial constructs. Therefore, as students learn and practice skills that lead to enhanced perceptions of connectedness with members of their school system, such skills would also lead to enhanced perceptions of relationships with parents.

While research has been conducted on students within the classroom and through small groups (see Brigman & Campbell, 2003; Campbell & Brigman, 2005; Lemberger & Clemens, 2012; Lemberger et al., 2015; Leon et al., 2011; Webb et al., 2005), the greater impact of SSS tenets has yet to be examined. Overall, the proposed study’s goal is to provide a valid understanding of how the SSS program transcends the school system through feelings of connectedness, parent-child relationship, and engagement in success skill behaviors.

**Research Questions**

Research Question 1. Does the SSS classroom intervention influence students’ perception of connectedness to school?

Research Question 2. Does the SSS classroom intervention influence students’ perception of the parent-child relationship?

Research Question 3. Does the SSS classroom intervention influence students’ engagement of student success skills?

Research Question 4. Does classroom membership, sex, age, or ethnicity impact students’ perceptions of connectedness to school?

Research Question 5. Does classroom membership, sex, age, or ethnicity impact students’ perceptions of the parent-child relationship?
Research Question 6. Does classroom membership, sex, age, or ethnicity impact students’ perceptions of engagement of student success skills?

Participants

Population

The SSS program is a part of the standard school counseling curriculum administered to all 7th and 8th grade students at a rural middle school in the southwest United States. Based on information collected from the United State Census Bureau (2015), the population of the surrounding community is less than 8,000 and 65.3% identify as Hispanic or Latino. Within this population, 38.6% of the population lives below the poverty level (U.S. Census Bureau, 2015). The middle school is categorized by the state as Title 1, indicating that 100% of the student population is eligible for combined free or reduced lunch.

During the previous school year, the New Mexico Public Education Department (NMPED, 2014) conducted a review of the participating school’s performance over the past three years. From this review, results indicated that students within the school performed 47.5% lower than the statewide benchmark for student performance. The middle school ranks 60% lower than the statewide benchmark (NMPED, 2014). 50% of economically disadvantaged students tested as proficient in reading while 30.5% tested proficient in math (NMPED, 2014). Overall, the participating school received a letter grade of D for scoring 43.35 out of a possible 100 points (NMPED, 2014).

Sampling Procedure

As the SSS intervention is a part of the standard school counseling curriculum at the participating middle school, school counselors used their established methods for
disseminating and collecting forms. The month prior to program administration, information on SSS study was disseminated to students and parents during school-teacher conferences. Three weeks prior to the first classroom intervention, informed consent forms were administered to all students within the 7th grade. Consent forms were returned throughout the week and accounted for prior to administration of pretest assessments. Collection procedures followed school form collection procedures. The informed consents identified study procedure, potential harms and benefits, confidentiality, and other stipulations regarding participation.

Sample

Participation in the study was voluntary and students had access to the program regardless of study participation. Since 8th grade students received the SSS program the year prior, sampling only focused on students within the 7th grade, as they had not been exposed to the SSS program. The sample size consisted of 41 out of approximately 145 eligible students. Within the sample, 63.4% identified as female (n = 26) and 36.6% identified as male (n = 15). Considering ethnicity, 68.3% of the sample identified as Hispanic (n = 28), 6.87% identified as White (n = 11), 2.4% identified as Asian (n = 1), and 2.4% identified as other (n = 1). Ages within the sample ranged from 12 (n = 21), 13 (n = 19), and 14 (n = 1).

Instruments

Child and Adolescent Social Support Scale-Revised (CASSS-R)

The Child and Adolescent Social Support Scale Revised (CASSS-R; Malecki, Demaray, & Elliott, 2000) is a psychometric assessment developed to measure students’ social support (Malecki & Demaray, 2002). The CASSS-R was developed as a
modification of the Students’ Social Support Scale to be more age-appropriate for administration to children and adolescents (Malecki & Elliott, 1999). The most current version of the CASSS-R is a 60-item self-report scale that measures perceived support from five subscales: parents, teachers, classmates, close friends, and people in my school (CASSS-R; Malecki et al., 2000). Each question is answered in two dimensions: frequency and importance. Frequency is measured on a 6-point Likert scale with answers ranging from 1 (never) to 6 (always). Importance is measured on a 3-point Likert scale from 1 (not important) to 3 (very important). Research on the CASSS-R indicated that students are able to differentiate between concepts of frequency and importance regarding to social support (Demaray & Malecki, 2003).

Reliability for the CASSS-R has a measured coefficient alpha of .88-.97 on total frequency and importance scales and related subscales (Malecki, Demaray, & Elliot, 2004). Test-retest correlations were conducted on a sample of middle school students demonstrated a strong correlation between the two administrations (Malecki et al., 2004). Validity for the CASSS was initially measured through being strongly correlated with other assessments measuring social support (Malecki & Demaray, 2002, 2003). Analysis of descriptive data has been used to identify any differences among sex, age, and race (Demaray & Malecki, 2003; Malecki & Demaray, 2002). Middle school females reported greater importance and frequency of support than males in the total score, close friend and classmate subscales (Demaray & Malecki, 2003; Malecki & Demaray, 2002). Additionally, minority middle school students reported feeling less support than White students on the teacher, classmate, close friend, and total scores (Malecki & Demaray, 2002; Demaray & Malecki, 2003). Specifically, Native American and Asian American
students reported social support as significantly less important than Hispanic American, African American, and White students (Demaray & Malecki, 2003; Malecki & Demaray, 2002). Pertaining to research on the SSS program, the CASSS has been used in numerous studies (Lemberger & Clemens, 2012; Lemberger et al., 2015) to measure connectedness as it pertains to constructs of SSS.

**Revised Family Communication Patterns (RFCP)**

Given the proposed study’s theoretical grounding in Individual Psychology, the RFCP (Ritchie & Fitzpatrick, 1990) was implemented to measure the communication patterns between adolescents and their parents as perceived by the adolescent. The assessment is constructed on two scales: conversation orientation, which refers to the open exchange between parent and child, and conformity orientation, the strength to which the parents are able to encourage their child to behave in a specific and desired manner (Sillars et al., 2005). The assessment consists of 26 questions. Each question is answered on a Likert-style scale of 1 to 5, ranging from strongly disagree (1) to agree strongly (5). The assessment is composed of both a child version and parent version to capture self-reported perceptions of familial communication patterns between parents and their children. Based on the outcomes from each subscale, family communication patterns can indicate familial type. Pluralistic families were characterized as reporting high on conversation orientation and low on conformity orientation while consensual families are portrayed as reporting high on both conversation and conformity orientation (Fitzpatrick & Ritchie, 1994). Laissez-faire families are depicted as reporting low on both orientations (Fitzpatrick & Ritchie, 1994).
Research on the RFCP has indicated a relationship between parental power and conformity as well as increased harmony as depicted by communication patterns (Ritchie & Fitzpatrick, 1990). The RFCP is a reliable instrument as correlation on test-retest yielded a 1.0 for conformity orientation and between .73 and .93 on conversation orientation, with the highest correlation observed with students in 7th grade and their parents (Ritchie & Fitzpatrick, 1990). Cronbach’s alpha for the conversation-orientation yielded a .84 while the conformity orientation yielded a .76. Psychometric data with an alpha of .5 indicated that girls tend to score higher on conversation orientation while boys were found to score higher on conformity orientation (Ritchie & Fitzpatrick, 1990). With regard to correlations between children and their parents, 7th grade students’ perceptions of conversation patterns were more highly correlated with the responses of their mothers’ and conformity patterns were more correlated to their fathers’ (Ritchie & Fitzpatrick, 1990).

**Student Engagement in Success Skills Survey-Revised (SE-SSS-R)**

The SE-SSS is a relatively new assessment developed by the creators of the SSS program through an exploratory factor analysis to measure the use of specific skills identified as being related to achievement (Carey, Brigman, Webb, Villares, & Harrington, 2014). The factor analysis with an alpha of .5 was conducted with students from grades four to eight and identified four latent factors: application of learning strategies, support of classmates learning, self-management of learning, and self-regulation of arousal (Carey et al., 2014). The assessment is composed of 33 questions; each question assesses successful behaviors used within the previous two weeks. Choices of responses include, “I didn’t do this at all; I did this once; I did this two times; I did this
three or more times” (Carey et al., 2014). The SE-SSS-R has recently been utilized to measure outcomes of the SSS intervention with a diverse population of over 4,500 students (Brigman et al., in press). Concluding uses of the SE-SSS identify administrations as being used to identify students’ needs or measure intervention outcomes. While this assessment has limited established reliability and validity, use within the study contribute to continued development of the SE-SSS-R.

**Procedures for Data Collection**

The semester prior to the study’s commencement, the 7th grade school counselor received a training on the SSS program. The 7th grade school counselor also utilized the SSS materials such as the manual and accompanying power point presentations.

The study was structured for a pretest-posttest methodology of data collection. Assessments were administered and collected before implementation of the intervention and again once the intervention was completed. Regardless of study participation, all students participated in pre-testing assessments. Pretests were administered by the school counselor following testing procedures created by the school. During the following week, students began the SSS classroom intervention. School counselors provided the classroom intervention once a week for five consecutive weeks during 7th grade social studies class. One week following the final SSS meeting, the school counselor administered posttest assessments using school testing procedures. While all students completed the assessments, only consenting students’ assessments were included in the current study.

**Data Preparation**
Pretest and posttest data were collected and entered upon participant completion. Students’ pretest and posttest assessments were matched. All participant information was then de-identified and assigned random identification numbers. Data were entered into a password-protected Excel spreadsheet based on instructions provided in each assessment manual.

**Data Analysis**

Given that the study design is a one-group pretest posttest, a paired-samples $t$-test was used to determine intervention effects; a paired-samples $t$-test identifies the mean differences within the same group as measured through continuous variables at two differing time points (Pallant, 2007). A pre-analysis and post-analysis Kruskal-Wallis Test analyzed within-group differences to identify possible confounding variables. Within this study, participants’ responses from each assessment were matched by pretest and posttest and analyzed through a paired-samples $t$-test. Assumptions of random sampling, independent observation, level of measurement, normal distribution, and homogeneity of variance were met (Pallant, 2007; Stevens, 1996).

As seen within a review of the literature and identified assessment norms, categorical factors such as ethnicity and sex have differing norms of connectedness and perceptions of parent-child relationship (Demaray & Malecki, 2003; Malecki & Demaray, 2002; Ritchie & Fitzpatrick, 1990). Specifically pertaining to feelings of connectedness in middle school students, females’ rating were higher in frequency and importance compared to males while minority students reported feeling less frequency and importance than white students (Demaray & Malecki, 2003; Malecki & Demaray, 2002). Psychometric properties of the RFCP indicated that females score higher on
conversation while males score higher on conformity (Ritchie & Fitzpatrick, 1990). Additionally, parental correlations with their children vary also by sex (Ritchie & Fitzpatrick, 1990). To determine the impact of these factors in addition to classroom membership and age on study outcomes, a Mann-Whitney U Test and Kruskal-Wallis Test determined pretest and posttest group differences. Significance level for all analyses was an alpha of .05.

The Kruskal-Wallis Test is a non-parametric analysis that compares scores of a continuous variable across three or more groups (Siegel & Castellan, 1988). Since the Kruskal-Wallis Test is a between-group analysis, membership of each group must be independent of one another (Pallant, 2007; Siegel & Castellan, 1988). Analysis consists of continuous scores first converted into ranks, then the mean rank for each group is compared (Pallant, 2007).

The Mann-Whitney U Test was used to identify potential group differences between sexes. As the Kruskal-Wallist Test compares scores across three or more groups (Siegel & Castellan, 1988), the Mann-Whitney U Test tests the differences between two groups (Pallant, 2007; Siegel & Castellan, 1988). Similar to the Kruskal-Wallis, the Mann-Whitney U Test converts the continuous variable scores into ranks across the two groups, then analyzes whether these ranks differ significantly. Since there are large differences in sample sizes between males and females, the sample does not meet the required assumptions of normal distribution.

Validity

A valid study yields conclusions that accurately quantify what the study intended to measure (Cook & Campbell, 1979). Internal validity is the degree to which the
research design has experimental control over extraneous and confounding variables (Cook & Campbell, 1979). As this study has no random assignment or control groups, the design is vulnerable to threats of internal validity. Possible threats include history, attrition, regression, and maturation. The study is unable to control for incidents that may occur within or directly impact the home environment and subsequent parent and child relationship. Additional factors outside of the studies control include overall school and community climate.

Statistical validity refers to the strength in which a Type I or Type II error does not occur. A Type I error indicates a false rejection of the null hypothesis, assuming there is a significant difference between groups when there actually is not (Cook & Campbell, 1979). A Type II error insinuates falsely accepting the null hypothesis, suggesting that there is no statistically significant difference between groups (Cook & Campbell, 1979). To reduce the occurrence of Type I and Type II errors, reliable and valid assessments measured constructs of the dependent variables. Each assessment has been previously studied to demonstrate psychometric properties, including construct validity and convergent validity (see Carey et al., 2014; Malecki et al., 2004; Ritchie & Fitzpatrick, 1990).

Considering the psychometric properties provided by each assessment, additional pretest and posttest analysis identified possible confounding variables on treatment outcomes. The Kruskal-Wallis Test and Mann-Whitney U Test investigated between-group differences within categorical groups such as sex, ethnicity, age, and classroom membership. To determine overall treatment effects, a paired-samples t-test compared the
means between all members of the treatment group to themselves from pretest to posttest. Results from the analysis are discussed in further detail within chapter four.

**Conclusion**

The study is a quasi-experimental one-group pretest-posttest design. The influence of the independent variable, the SSS intervention, was investigated with regards to dependent variables of feelings of connectedness, parent-child relationship, and engagement in success skills. Given the literature on the proposed assessments, the researcher identified possible confounding variables and provided a sound data analysis modality to account for possible influence on treatment outcomes. The researcher also identified possible treats to validity and the measures taken within the analysis to ensure that the proposed study yielded results that accurately measure each research question accordingly.
CHAPTER 4 – RESULTS

This chapter includes results from the current study. An overview of preliminary non-parametric analysis is presented to identify possible group differences with consideration to sex, ethnicity, age, and classroom membership. The researcher provides the results of paired-samples t-tests to determine significant and non-significant relationships from pretest to posttest with regard to the measured constructs (Pallant, 2007; Siegel & Castellan, 1988). Additional nonparametric posttest analysis further investigated between-group differences within the treatment group. The chapter is organized per assessment to provide context to analysis results.

Descriptive Statistics

Prior to analysis, descriptive statistics on the sample were analyzed to test assumptions and obtain categorical information pertaining to the sample. The current sample consisted of both males \((n = 15)\) and females \((n = 26)\) from four different ethnic groups: Asian American \((n = 1)\), White \((n = 11)\), Hispanic American \((n = 28)\), and other \((n = 1)\). Students’ ages within the sample ranged from 12 \((n = 21)\), 13 \((n = 19)\), and 14 \((n = 1)\). The SSS intervention was administered to six different social studies classrooms, categorized by period 2 \((n = 2)\), period 3 \((n = 8)\), period 4 \((n = 3)\) period 5 \((n = 8)\), period 6 \((n = 9)\), and period 8 \((n = 11)\). Descriptive information for each categorical variable is summarized in Table 2.
Table 2

Descriptive Statistics for Categorical Variables.

<table>
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<tr>
<th>Categorical Variable</th>
<th>Frequency</th>
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</tr>
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<tr>
<td>13</td>
<td>19</td>
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<td>100.0</td>
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<td>Female</td>
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<td>Total</td>
<td>41</td>
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<tr>
<td>Class Period</td>
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</tr>
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<td>4.9</td>
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<td>7.3</td>
<td>31.7</td>
</tr>
<tr>
<td>P5</td>
<td>8</td>
<td>19.5</td>
<td>19.5</td>
<td>51.2</td>
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<td>P6</td>
<td>9</td>
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<td>22.0</td>
<td>73.2</td>
</tr>
<tr>
<td>P8</td>
<td>11</td>
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<td>26.8</td>
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</tr>
<tr>
<td>Total</td>
<td>41</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Child and Adolescent Social Support Scale-Revised (CASSS-R)**

The analysis considered the psychometric properties of the CASSS-R in addition to other possible confounding variables of group differences within pretest and posttest results. Treatment effects between pretest and posttest results are provided.

Descriptive data for the CASSS-R identified sex as a possible confounding variable with regard to responses of middle school students (Demaray & Malecki, 2003; Malecki & Demaray, 2002). These properties are consistent with research investigating sex differences of perceived support from parents, peers, and school members (Furman & Buhrmester, 1992; Kerns, Klepac, & Cole, 1996). Psychometric properties for the CASSS-R also indicated that minority students’ results are significantly different than
reported outcomes for White students (Demaray & Malecki, 2003; Malecki & Demaray, 2002). In addition to the identified confounding variables of sex and ethnicity, preliminary and post analysis also considers effects from classroom membership due to theoretical dispositions from Individual Psychotherapy (Balson, 1988).

**Preliminary Analysis**

To determine group differences between sexes, a preliminary analysis of a Mann-Whitney U Test was used with regard to the CASSS-R. Results from the Mann-Whitney U Test revealed significant differences in perceptions of support from close friends of males ($Md = 61, n = 15$) and females ($Md = 66.5, n = 26$), $U = 121, z = -2.006, p = 0.045, r = 0.31$. Results also indicated no significant differences of support frequency from the following sources: parents of males ($Md = 58, n = 15$) and females ($Md = 56.5, n = 26$), $U = 169, z = -0.705, p = 0.481, r = 0.11$; teachers of males ($Md = 61, n = 15$) and females ($Md = 59, n = 26$), $U = 188.5, z = -0.176, p = 0.860, r = 0.027$; classmates of males ($Md = 57, n = 15$) and females ($Md = 53.5, n = 26$), $U = 190.5, z = -0.122, p = 0.903, r = 0.019$; and people at school of males ($Md = 46, n = 15$) and females ($Md = 49, n = 26$), $U = 184, z = -0.298, p = 0.766, r = 0.047$. Additionally, no significant differences were identified between sex and perceptions of importance of relationships with the following sources: parents of males ($Md = 26, n = 15$) and females ($Md = 26.5, n = 26$), $U = 193.5, z = -0.041, p = 0.967, r = 0.006$; teachers of males ($Md = 28, n = 15$) and females ($Md = 29, n = 26$), $U = 151, z = -1.199, p = 0.231, r = 0.187$; classmates of males ($Md = 26, n = 15$) and females ($Md = 25, n = 26$), $U = 185, z = -0.272, p = 0.786, r = 0.042$; close friends of males ($Md = 26, n = 15$) and females ($Md = 29, n = 26$), $U = 136, z = -1.606, p = 0.108, r = 0.251$; and people at school of males ($Md = 24, n = 15$) and females ($Md = 24, n = 26$),
\( U = 190, z = -0.136, p = 0.892, r = 0.021. \) Overall findings from the Mann-Whitney U Test are displayed in Table 3.

A preliminary analysis using the Kruskal-Wallis Test revealed no statistically significant differences across ethnicity groups on frequency from the following sources of support: parent, \( X^2 (3, n = 41) = 1.360, p = 0.715; \) teacher, \( X^2 (3, n = 41) = 1.533, p = 0.675; \) classmate, \( X^2 (3, n = 41) = 2.015, p = 0.569; \) close friend, \( X^2 (3, n = 41) = 4.779, p = 0.189; \) and people at school, \( X^2 (3, n = 41) = 1.657, p = 0.647. \) No statistically significant differences were identified within perceived importance of support from the following sources across ethnic groups: parent, \( X^2 (3, n = 41) = 1.547, p = 0.671; \) teacher, \( X^2 (3, n = 41) = 2.556, p = 0.465; \) classmate, \( X^2 (3, n = 41) = 2.256, p = 0.521; \) close friend, \( X^2 (3, n = 41) = 3.387, p = 0.336; \) and people at school, \( X^2 (3, n = 41) = 4.019, p = 0.259. \) Preliminary findings from the Kruskal-Wallis Test between ethnic groups for the CASSS-R subscales are provided in Table 3.

Preliminary findings from a Kruskal-Wallis Test indicated no significant differences across classrooms to perceptions and importance from the following sources of social support: parent frequency, \( X^2 (5, n = 41) = 2.025, p = 0.846; \) parent importance, \( X^2 (5, n = 41) = 1.759, p = 0.881; \) teacher frequency, \( X^2 (5, n = 41) = 1.462, p = 0.917; \) teacher importance, \( X^2 (5, n = 41) = 3.985, p = 0.552; \) classmate frequency, \( X^2 (5, n = 41) = 3.756, p = 0.585; \) classmate importance, \( X^2 (5, n = 41) = 1.709, p = 0.888; \) close friend frequency, \( X^2 (5, n = 41) = 4.658, p = 0.459; \) close friend importance, \( X^2 (5, n = 41) = 3.019, p = 0.697; \) people at school frequency, \( X^2 (5, n = 41) = 9.339, p = 0.096; \) and people at school importance, \( X^2 (5, n = 41) = 1.654, p = 0.895. \) A summary table with results from the preliminary Kruskal-Wallis Test results is provided in Table 3.
Table 3

Summary Table from Preliminary Analysis for CASSS-R by Sex, Ethnicity, and Class Period.

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td>Mann-Whitney UZ</td>
<td>169</td>
<td>-.705</td>
<td>193.5</td>
<td>-.041</td>
<td>188.5</td>
<td>-.176</td>
<td>151</td>
<td>-.199</td>
<td>190.5</td>
<td>-.122</td>
</tr>
<tr>
<td></td>
<td>Asympt. Sig. (2-tailed)</td>
<td>.481</td>
<td>.967</td>
<td>.860</td>
<td>.231</td>
<td>.903</td>
<td>.786</td>
<td>.045</td>
<td>.108</td>
<td>.766</td>
<td>.892</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td>Chi-Square df Asympt. Sig.</td>
<td>1.36</td>
<td>3</td>
<td>1.547</td>
<td>3</td>
<td>1.533</td>
<td>3</td>
<td>2.556</td>
<td>3</td>
<td>2.015</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.715</td>
<td>.671</td>
<td>.675</td>
<td>.465</td>
<td>.569</td>
<td>.521</td>
<td>.189</td>
<td>.336</td>
<td>.647</td>
<td>.259</td>
</tr>
<tr>
<td><strong>Class Period</strong></td>
<td>Chi-Square df Asympt. Sig.</td>
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<td>1.759</td>
<td>5</td>
<td>1.462</td>
<td>5</td>
<td>3.985</td>
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<tr>
<td></td>
<td></td>
<td>.846</td>
<td>.881</td>
<td>.917</td>
<td>.552</td>
<td>.585</td>
<td>.888</td>
<td>.459</td>
<td>.697</td>
<td>.906</td>
<td>.895</td>
</tr>
</tbody>
</table>

Treatment Effects

A paired-samples t-test was used to identify treatment effects by examining mean differences between pretest results and posttest results. Assumptions for the t-test have been met through research design and investigation of histograms to determine normal distribution (Pallant, 2007; Stevens, 1996).

Results from the paired-samples t-test indicated significant mean differences between pretest and posttest on subscales of perceived teacher support importance, classmates’ frequency of support, close friend frequency of support, and people in school frequency of support. There was a statistically significant decrease in perceived importance of teacher support from pretest ($M = 28.537$, $SD = 3.515$) to posttest ($M = 26.903$, $SD = 3.300$), $t (40) = 3.171$, $p = 0.003$ (two-tailed). Reported perceptions of classmates’ frequency of support significantly decreased from pretest ($M = 51.195$, $SD =$
12.983) to posttest ($M = 48.317, SD = 13.701$), $t (40) = 2.253$, $p = 0.030$ (two-tailed).

Additionally, significant decreases were also reported for perceived support from close friends from pretest ($M = 60.951, SD = 11.041$) to posttest ($M = 58.366, SD = 11.970$), $t (40) = 2.106$, $p = 0.042$ (two-tailed) and within perceived support from people in school from pretest ($M = 48.244, SD = 14.501$) to posttest ($M = 42.976, SD = 14.892$), $t (40) = 2.999$, $p = 0.005$ (two-tailed).

While some subscales indicated significant decreases, others maintained stable from pretest to posttest. Subscales with non-significant mean differences include: parent frequency from pretest ($M = 54.732, SD = 11.958$) to posttest ($M = 52.488, SD = 13.018$), $t (40) = 1.888$, $p = 0.066$ (two-tailed); parent importance from pretest ($M = 27.098, SD = 4.609$) to posttest ($M = 26.049, SD = 5.03$), $t (40) = 1.631$, $p = 0.111$ (two-tailed); teacher frequency from pretest ($M = 57.634, SD = 8.136$) to posttest ($M = 55.024, SD = 9.158$), $t (40) = 1.914$, $p = 0.003$ (two-tailed); classmate importance from pretest ($M = 25.171, SD = 4.806$) to posttest ($M = 24.366, SD = 4.882$), $t (40) = 1.365$, $p = 0.180$ (two-tailed); close friend importance pretest ($M = 28.195, SD = 5.149$) to posttest ($M = 26.805, SD = 5.212$), $t (40) = 1.976$, $p = 0.055$ (two-tailed); and people in school importance from pretest ($M = 24.707, SD = 5.433$) to posttest ($M = 23.195, SD = 5.419$), $t (40) = 1.795$, $p = 0.080$ (two-tailed). Table 4 provides a summary from the paired-samples t-test while Table 5 includes statistics from the paired-samples analysis.
Table 4

Summary Table from Paired-samples t-test for CASSS-R between Pretest and Posttest.

<table>
<thead>
<tr>
<th>Pair</th>
<th>Paired Differences</th>
<th>Paired Differences</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>Pre Parent Frequency – Post Parent Frequency</td>
<td>2.24390</td>
<td>7.60848</td>
<td>1.18825</td>
<td>-1.15763</td>
</tr>
<tr>
<td>Pair 2</td>
<td>Pre Parent Importance – Post Parent Importance</td>
<td>1.04878</td>
<td>4.11674</td>
<td>.64293</td>
<td>-.25062</td>
</tr>
<tr>
<td>Pair 3</td>
<td>Pre Teacher Frequency – Post Teacher Frequency</td>
<td>2.60976</td>
<td>8.73178</td>
<td>1.36367</td>
<td>-.14633</td>
</tr>
<tr>
<td>Pair 4</td>
<td>Pre Teacher Importance – Post Teacher Importance</td>
<td>1.63415</td>
<td>3.29967</td>
<td>.51532</td>
<td>.59264</td>
</tr>
<tr>
<td>Pair 5</td>
<td>Pre Classmates Frequency – Post Classmates Frequency</td>
<td>2.87805</td>
<td>8.17984</td>
<td>1.27748</td>
<td>2.9617</td>
</tr>
<tr>
<td>Pair 6</td>
<td>Pre Classmates Importance – Post Classmates Importance</td>
<td>.80488</td>
<td>3.77637</td>
<td>.58977</td>
<td>.38709</td>
</tr>
<tr>
<td>Pair 7</td>
<td>Pre Close Friends Frequency – Post Close Friends Frequency</td>
<td>2.58537</td>
<td>7.86122</td>
<td>1.22772</td>
<td>1.0406</td>
</tr>
<tr>
<td>Pair 8</td>
<td>Pre Close Friends Importance – Post Close Friends Importance</td>
<td>1.39024</td>
<td>4.50488</td>
<td>.70354</td>
<td>-.03167</td>
</tr>
<tr>
<td>Pair 9</td>
<td>Pre People in School Frequency – Post People in School Frequency</td>
<td>5.26829</td>
<td>11.24728</td>
<td>1.75653</td>
<td>1.71821</td>
</tr>
<tr>
<td>Pair 10</td>
<td>Pre People in School Importance – Post People in School Importance</td>
<td>1.51220</td>
<td>5.39501</td>
<td>.84256</td>
<td>-.19068</td>
</tr>
</tbody>
</table>
Table 5

Statistics from Paired-samples t-test for CASSS-R between Pretest and Posttest.

<table>
<thead>
<tr>
<th>Pair</th>
<th>Pre Parent Frequency</th>
<th>Post Parent Frequency</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>54.731741</td>
<td>52.487841</td>
<td>11.95831</td>
<td>41</td>
<td></td>
<td>1.86757</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre Parent Importance</td>
<td>27.097641</td>
<td>4.60871</td>
<td></td>
<td>.71976</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post Parent Importance</td>
<td>26.048841</td>
<td>5.02967</td>
<td></td>
<td>.78550</td>
</tr>
<tr>
<td>2</td>
<td>Pre Teacher Frequency</td>
<td>57.634141</td>
<td>8.13559</td>
<td>41</td>
<td></td>
<td>1.27057</td>
</tr>
<tr>
<td></td>
<td>Post Teacher Frequency</td>
<td>55.024441</td>
<td>9.15830</td>
<td>41</td>
<td></td>
<td>1.43029</td>
</tr>
<tr>
<td></td>
<td>Pre Teacher Importance</td>
<td>28.536641</td>
<td>3.51495</td>
<td>41</td>
<td></td>
<td>.54894</td>
</tr>
<tr>
<td></td>
<td>Post Teacher Importance</td>
<td>26.902441</td>
<td>3.30004</td>
<td>41</td>
<td></td>
<td>.51538</td>
</tr>
<tr>
<td>3</td>
<td>Pre Classmate Frequency</td>
<td>51.195141</td>
<td>12.98310</td>
<td>41</td>
<td></td>
<td>2.02762</td>
</tr>
<tr>
<td></td>
<td>Post Classmate Frequency</td>
<td>48.317141</td>
<td>13.70117</td>
<td>41</td>
<td></td>
<td>2.13976</td>
</tr>
<tr>
<td></td>
<td>Pre Classmate Importance</td>
<td>25.170741</td>
<td>4.80574</td>
<td>41</td>
<td></td>
<td>.75053</td>
</tr>
<tr>
<td></td>
<td>Post Classmate Importance</td>
<td>24.365941</td>
<td>4.88240</td>
<td>41</td>
<td></td>
<td>.76250</td>
</tr>
<tr>
<td>4</td>
<td>Pre Close Friend Frequency</td>
<td>60.951241</td>
<td>11.04072</td>
<td>41</td>
<td></td>
<td>1.72427</td>
</tr>
<tr>
<td></td>
<td>Post Close Friend Frequency</td>
<td>58.365941</td>
<td>11.97029</td>
<td>41</td>
<td></td>
<td>1.86944</td>
</tr>
<tr>
<td></td>
<td>Pre Close Friend Importance</td>
<td>28.195141</td>
<td>5.14888</td>
<td>41</td>
<td></td>
<td>.80412</td>
</tr>
<tr>
<td></td>
<td>Post Close Friend Importance</td>
<td>26.804941</td>
<td>5.21162</td>
<td>41</td>
<td></td>
<td>.81392</td>
</tr>
<tr>
<td>5</td>
<td>Pre People in School Frequency</td>
<td>48.243941</td>
<td>14.50135</td>
<td>41</td>
<td></td>
<td>2.26473</td>
</tr>
<tr>
<td></td>
<td>Post People in School Frequency</td>
<td>42.975641</td>
<td>14.89209</td>
<td>41</td>
<td></td>
<td>2.32575</td>
</tr>
<tr>
<td></td>
<td>Pre People in School Importance</td>
<td>24.707341</td>
<td>5.43251</td>
<td>41</td>
<td></td>
<td>.84842</td>
</tr>
<tr>
<td></td>
<td>Post People in School Importance</td>
<td>23.195141</td>
<td>5.41858</td>
<td>41</td>
<td></td>
<td>.84624</td>
</tr>
</tbody>
</table>

Post Analysis

Results from the preliminary analysis on sex identifying significant differences between males and females on frequency of relationships with close friends indicate the need to follow up treatment outcome results with another analysis investigating possible sex differences within the treatment sample. A Mann-Whitney U Test identified no significant differences in perceived frequency of support within the following sources of support: parents of males ($Md = 49$, $n = 15$) and females ($Md = 56$, $n = 26$), $U = 168$, $z =$ -
0.731, \( p = 0.465, r = 0.114 \); teachers of males (\( Md = 49, n = 15 \)) and females (\( Md = 60.5, n = 26 \)), \( U = 138.5, z = -1.532, p = 0.125, r = 0.239 \); classmates of males (\( Md = 41, n = 15 \)) and females (\( Md = 50.5, n = 26 \)), \( U = 157.5, z = -1.016, p = 0.31, r = .159 \); close friends of males (\( Md = 53, n = 15 \)) and females (\( Md = 63.5, n = 26 \)), \( U = 132, z = -1.708, p = 0.088, r = 0.267 \); and people at school of males (\( Md = 38, n = 15 \)) and females (\( Md = 43, n = 26 \)), \( U = 152.5, z = -1.152, p = 0.249, r = 0.18 \).

A difference was identified within perceptions of importance of support with people within the school as females (\( Md = 24, n = 26 \)) were significantly different from males (\( Md = 21, n = 15 \)), \( U = 119.5, z = -2.049, p = 0.040, r = 0.32 \). Other scales measuring perceived importance of support were found to be non-significant from the following sources: parents of males (\( Md = 24, n = 15 \)) and females (\( Md = 26, n = 26 \)), \( U = 142, z = -1.440, p = 0.150, r = 0.225 \); teachers of males (\( Md = 25, n = 15 \)) and females (\( Md = 28, n = 26 \)), \( U = 127, z = -1.853, p = 0.064, r = 0.289 \); classmates of males (\( Md = 24, n = 15 \)) and females (\( Md = 24, n = 26 \)), \( U = 174, z = -0.570, p = 0.568, r = 0.089 \); and close friends of males (\( Md = 24, n = 15 \)) and females (\( Md = 27, n = 26 \)), \( U = 152, z = -1.167, p = 0.243, r = 0.182 \). Post analysis findings for sex through the Mann-Whitney U Test are provided in Table 6.

Preliminary analysis did not indicate any significant differences across ethnic groups with regard to perceived frequency and importance of support sources. Post-analysis results from a Kruskal-Wallis Test also indicate no statically significant differences across ethnic groups to perceived frequency and importance of support. Specifically, findings indicate that frequency of support was non-significant for the following sources: parent, \( X^2 (3, n = 41) = 1.472, p = 0.689 \); teacher, \( X^2 (3, n = 41) = \)
2.463, \( p = 0.482 \); classmate, \( X^2 (3, n = 41) = 2.943, p = 0.401 \); close friend, \( X^2 (3, n = 41) = 4.939, p = 0.176 \); and people at school, \( X^2 (3, n = 41) = 3.237, p = 0.357 \).

Perceptions of importance also did not differ significantly across ethnic groups from the following sources: parent, \( X^2 (3, n = 41) = 2.007, p = 0.571 \); teacher, \( X^2 (3, n = 41) = 1.635, p = 0.651 \); classmate, \( X^2 (3, n = 41) = 6.864, p = 0.076 \); close friend, \( X^2 (3, n = 41) = 5.982, p = 0.112 \); and people at school, \( X^2 (3, n = 41) = 2.103 p = 0.551 \). Post analysis results from the Kruskal-Wallis Test for the CASSS-R subscales across ethnic groups are provided in Table 6.

A post-Kruskal-Wallis Test of classroom membership within the treatment group signify a statistically significant difference to reported frequency of close friend support, \( X^2 (5, n = 41) = 12.551, p = 0.028 \). A post-hoc analysis through the Mann-Whitney U test determined which classrooms were significantly different. To control for type I error, Bonferroni adjustment was applied to the alpha level (Pallant, 2007). By investigating median rankings for close friend frequency, the goal was to identify whether class period 4 is statistically significant from the remaining class periods. Since four additional comparisons will be made, the adjusted alpha level is set at 0.0125. Results from the post-hoc Mann-Whitney U test signify that students with class period four (\( Md = 71, n = 3 \)) perceived higher frequencies of support from close friends than students in period eight (\( Md = 57, n = 11 \), \( U = .000, z = -2.569, p = 0.010, r = 0.401 \)).

Results from the remaining subscales indicate no statistically significant differences between classrooms to frequency and importance of sources of support: parent frequency, \( X^2 (5, n = 41) = 2.618, p = 0.759 \); parent importance, \( X^2 (5, n = 41) = 1.426, p = 0.921 \); teacher frequency, \( X^2 (5, n = 41) = 9.553, p = 0.089 \); teacher
importance, $X^2 (5, n = 41) = 1.432, p = 0.921$; classmate frequency, $X^2 (5, n = 41) = 8.414, p = 0.135$; classmate importance, $X^2 (5, n = 41) = 6.599, p = 0.252$; people at school frequency, $X^2 (5, n = 41) = 10.146, p = 0.071$; and people at school importance, $X^2 (5, n = 41) = 6.522, p = 0.259$.

A summary of the findings from this post analysis is depicted in Table 6.

Table 6

Post Analysis Summary Table for CASSS-R by Sex, Ethnicity, and Class Period.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Mann-Whitney U Z</td>
<td>168</td>
<td>-7.31</td>
<td>142</td>
<td>-1.44</td>
<td>138.5</td>
<td>-1.532</td>
<td>127</td>
<td>-1.853</td>
<td>157.5</td>
<td>-1.016</td>
</tr>
<tr>
<td></td>
<td>Asymp. Sig. (2-tailed)</td>
<td>0.465</td>
<td>0.50</td>
<td>0.125</td>
<td>0.064</td>
<td>0.310</td>
<td>0.568</td>
<td>0.088</td>
<td>0.243</td>
<td>0.249</td>
<td>0.040</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Chi-Square df</td>
<td>1.472</td>
<td>3</td>
<td>2.007</td>
<td>3</td>
<td>2.463</td>
<td>3</td>
<td>1.635</td>
<td>3</td>
<td>2.943</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Asymp. Sig.</td>
<td>0.689</td>
<td>0.571</td>
<td>0.482</td>
<td>0.651</td>
<td>0.401</td>
<td>0.076</td>
<td>0.176</td>
<td>0.112</td>
<td>0.357</td>
<td>0.551</td>
</tr>
<tr>
<td>Class Period</td>
<td>Chi-Square df</td>
<td>2.618</td>
<td>5</td>
<td>1.426</td>
<td>5</td>
<td>9.553</td>
<td>5</td>
<td>1.432</td>
<td>5</td>
<td>8.414</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Asymp. Sig.</td>
<td>0.759</td>
<td>0.921</td>
<td>0.089</td>
<td>0.921</td>
<td>0.135</td>
<td>0.258</td>
<td>0.028</td>
<td>0.252</td>
<td>0.071</td>
<td>0.259</td>
</tr>
</tbody>
</table>

Revised Family Communication Patterns (RFCP)

Modalities of analysis investigated the effects of confounding variables such as sex, ethnicity, and classroom membership at pretest and posttest. Treatment effects are yielded through a paired-samples $t$-test.

Multiple investigations of parent-child relationships on middle school students have indicated sex differences between male and female students (Fuligni & Eccles, 1993; Kerns, Klepac, & Cole, 1996). Specifically, females have historically reported greater perceptions of intimacy within their parental relationships as opposed to males (Fuligni & Eccles, 1993). Additionally, psychometric properties for the RFCP suggest
sex differences as an influential variable to assessment outcomes (Ritchie & Fitzpatrick, 1990). Research on parenting styles have also suggested differences between ethnic groups (Dixon et al., 2008). Such suppositions are consistent with concepts from Individual Psychotherapy, as parenting techniques are often passed down from generation to generation (Adler, 1964; Dreikurs, 1962; Spiel & Birnbaum, 1930), much like cultural practices and norms. Preliminary analysis and post analysis investigated the effect of sex, ethnicity, and classroom membership on assessment outcomes.

**Preliminary Analysis**

Results from a Mann-Whitney U test indicated no significant differences between males ($Md = 44, n = 15$) and females ($Md = 57, n = 26$), $U = 133, z = -1.680, p = 0.093, r = 0.262$, to conversation orientation. Conformity orientation at pretest also yielded no significant differences between males ($Md = 33, n = 15$) and females ($Md = 36, n = 26$), $U = 182, z = -0.352, p = 0.725, r = 0.055$. A summary of these preliminary analysis is provided in Table 7. Additional preliminary analysis of a Kruskal-Wallis Test indicated no statistically significant differences among ethnic groups on conversation orientation, $X^2 (3, n = 41) = 2.385, p = 0.497$, or conformity orientation, $X^2 (3, n = 41) = 2.309, p = 0.511$. Within the sample, students identify as Asian American ($n = 1$), White ($n = 11$), Hispanic American ($n = 28$), and other ($n = 1$). A summary of these findings is depicted in Table 7.

No significant group differences within preliminary analysis were identified between classroom membership the subscales of conversation orientation, $X^2 (5, n = 41) = 2.835, p = 0.725$. Significant group differences were indicated on the conformity orientation subscale, $X^2 (5, n = 41) = 13.915, p = 0.016$. Post-hoc analysis through a
Mann-Whitney U test was conducted with a Bonferroni adjustment to decrease the change of type I error. Based on rankings, three post-hoc analyses were conducted to determine if class period 4 is statistically different from periods 3, 5, and 8 at an alpha level of 0.017. Post-hoc results indicated a significant relationship between class period 4 (Md = 44, n = 3) and period 5 (Md = 33, n = 8), U = 0.000, z = --2.466, p = 0.014, r = 0.385. A summary of the Kruskal-Wallis Test findings is provided in Table 7.

Table 7

Summary of Preliminary Analysis for RFCP by Sex, Ethnicity, and Class Period.

<table>
<thead>
<tr>
<th>Categorical Variable</th>
<th>Analysis</th>
<th>Pre Conversation</th>
<th>Pre Conformity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Mann-Whitney U</td>
<td>133.000</td>
<td>182.000</td>
</tr>
<tr>
<td></td>
<td>Z</td>
<td>-1.680</td>
<td>-.352</td>
</tr>
<tr>
<td></td>
<td>Asymp. Sig. (2-tailed)</td>
<td>.093</td>
<td>.725</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Chi-Square df</td>
<td>2.385</td>
<td>2.309</td>
</tr>
<tr>
<td></td>
<td>Asymp. Sig.</td>
<td>.497</td>
<td>.511</td>
</tr>
<tr>
<td>Class Period</td>
<td>Chi-Square df</td>
<td>2.835</td>
<td>13.915</td>
</tr>
<tr>
<td></td>
<td>Asymp. Sig.</td>
<td>.725</td>
<td>.016</td>
</tr>
</tbody>
</table>

Treatment Effects

A paired-samples t-test was used to identify mean differences from pretest to posttest on the conversation and conformity subscales within the RFCP assessment. Histograms and research design ensure that assumptions for the t-test with regard to the RFCP data have been met (Pallant, 2007; Stevens, 1996). Analysis results indicated a statistically significant decrease in means of conversation orientation from pretest (M = 51.805, SD = 11.637) to posttest (M = 49.293, SD = 13.806), t (40) = 2.796, p = 0.008 (two-tailed). Conformity orientation remained stable from pretest (M = 35.756, SD = 6.359) to posttest (M = 37.098, SD = 8.303), t (40) = -1.348, p = 0.185 (two-tailed). A
summary of the paired-samples t-test results is included in Table 8 while Table 9 provides supplemental statistical information.

Table 8

*Summary Table from Paired-Samples T-Test for RFCP between Pretest and Posttest.*

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>95% Confidence Interval of the Difference</th>
<th>Lower</th>
<th>Upper</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair Pre Conversation – Post Conversation</td>
<td>2.512205</td>
<td>5.75379</td>
<td>.89859</td>
<td>4.32832</td>
<td>69607</td>
<td>.69607</td>
<td>2.796</td>
<td>40</td>
<td>.008</td>
</tr>
<tr>
<td>Pair Pre Conformity – Post Conformity</td>
<td>-1.3415</td>
<td>6.37028</td>
<td>.99487</td>
<td>3.35217</td>
<td>66925</td>
<td>-1.34</td>
<td>40</td>
<td>.185</td>
<td></td>
</tr>
</tbody>
</table>

Table 9

*Statistics from Paired-Samples T-Test for RFCP between Pretest and Posttest.*

<table>
<thead>
<tr>
<th>Pair</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre Conversation</td>
<td>51.8049</td>
<td>41</td>
<td>11.63662</td>
<td>1.81734</td>
</tr>
<tr>
<td>Post Conversation</td>
<td>49.2927</td>
<td>41</td>
<td>13.80624</td>
<td>2.15617</td>
</tr>
<tr>
<td>Pre Conformity</td>
<td>35.7561</td>
<td>41</td>
<td>6.35917</td>
<td>1.29671</td>
</tr>
<tr>
<td>Post Conformity</td>
<td>37.0976</td>
<td>41</td>
<td>8.30303</td>
<td>1.29671</td>
</tr>
</tbody>
</table>

**Post Analysis**

Similar to findings in the preliminary analysis, post analysis of the Mann-Whitney U identified no significant differences in conversation orientation between males ($Md = 42, n = 15$) and females ($Md = 56.5, n = 26$), $U = 131.5, z = -1.720, p = 0.085, r = 0.267$. Additionally, no significant differences were evident within conformity orientation between males ($Md = 34, n = 15$) and females ($Md = 38.5, n = 26$), $U = 166.5, z = -0.773, p = 0.440, r = 0.121$. No significant differences within the RFCP subscales were
identified between ethnic groups for conversion orientation, $X^2 (5, n = 41) = 2.670, p = 0.445$, and conformity orientation, $X^2 (5, n = 41) = 3.110, p = 0.375$. Nor were there significant differences across classrooms for both conversation, $X^2 (5, n = 41) = 3.170, p = 0.674$, and conformity subscales, $X^2 (5, n = 41) = 9.245, p = 0.100$. A summary of post analysis results from the RFCP across sex, ethnicity, classroom membership are provided in Table 10.

Table 10

**Summary of Post Analysis for RFCP Subscales by Sex, Ethnicity, and Class Period.**

<table>
<thead>
<tr>
<th>Categorical Variable</th>
<th>Analysis</th>
<th>Post Conversation</th>
<th>Post Conformity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Mann-Whitney UZ</td>
<td>131.500</td>
<td>166.500</td>
</tr>
<tr>
<td></td>
<td>Asymp. Sig. (2-tailed)</td>
<td>-1.720</td>
<td>-1.773</td>
</tr>
<tr>
<td></td>
<td>Z</td>
<td>.085</td>
<td>.440</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Chi-Square df</td>
<td>2.670</td>
<td>3.110</td>
</tr>
<tr>
<td></td>
<td>Asymp. Sig.</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>df</td>
<td>.445</td>
<td>.375</td>
</tr>
<tr>
<td>Class Period</td>
<td>Chi-Square df</td>
<td>3.170</td>
<td>9.245</td>
</tr>
<tr>
<td></td>
<td>Asymp. Sig.</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>df</td>
<td>.674</td>
<td>.100</td>
</tr>
</tbody>
</table>

**Student Engagement in Success Skills Survey-Revised (SE-SSS-R)**

As discussed within the review of relevant literature, behaviors related to school success differ amongst sexes and ethnicity (Meece et al., 2006; Pajares & Valiante, 2001; Rumberger, 1995; Usher & Pajares, 2006). Additionally, as each classroom is reflective of a different environment, behaviors in one may differ dramatically from others. Therefore, it was essential to investigate possible differences between class period in addition to sex and ethnic groups at both pretest and posttest.

**Preliminary Analysis**
Findings from the Mann-Whitney U preliminary analysis indicate a statistically significant difference between males ($Md = 104, n = 15$) and females ($Md = 125, n = 26$), $U = 117, z = -2.116, p = 0.034, r = 0.33$. No significant differences between ethnic groups, $X^2 (3, n = 41) = 4.359, p = 0.225$, or class periods, $X^2 (5, n = 41) = 4.118, p = 0.533$, were identified within pretest results. Preliminary analysis results are summarized in Table 11.

Table 11

Summary of Preliminary Analysis for SE-SSS-R by Sex, Ethnicity, and Class Period.

<table>
<thead>
<tr>
<th>Categorical Variable</th>
<th>Analysis</th>
<th>Pre SE-SSS-R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Mann-Whitney U</td>
<td>177.000</td>
</tr>
<tr>
<td></td>
<td>Z</td>
<td>-2.116</td>
</tr>
<tr>
<td></td>
<td>Asymp. Sig. (2-tailed)</td>
<td>.034</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Chi-Square df</td>
<td>4.359</td>
</tr>
<tr>
<td></td>
<td>Asymp. Sig.</td>
<td>.225</td>
</tr>
<tr>
<td>Class Period</td>
<td>Chi-Square df</td>
<td>4.118</td>
</tr>
<tr>
<td></td>
<td>Asymp. Sig.</td>
<td>.533</td>
</tr>
</tbody>
</table>

Treatment Effects

To determine treatment effects on engagement of success skills, a paired-samples $t$-test was used to measure mean differences within the treatment group from pretest to posttest. Results indicated a significant decrease of means from pretest ($M = 117.976, SD = 19.707$) to posttest ($M = 110.585, SD = 22.104$), $t(40) = 3.810, p < 0.000$ (two-tailed). A summary of results from the paired-samples $t$-test is provided in Table 12 with supporting statistical descriptors in Table 13.
Table 12

Summary Table from Paired-Samples T-Test for SE-SSS-R between Pretest and Posttest.

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>95% Confidence Interval of the Difference</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair Pre SE-1 SSS – Post SE-SSS</td>
<td>7.39024</td>
<td>12.42151</td>
<td>1.93991</td>
<td>3.46953</td>
<td>11.31096</td>
</tr>
</tbody>
</table>

Table 13

Statistics from Paired-Samples T-Test for SE-SSS-R between Pretest and Posttest.

<table>
<thead>
<tr>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre SE-SSS</td>
<td>117.9756</td>
<td>41</td>
<td>19.70722</td>
</tr>
<tr>
<td>Post SE-SSS</td>
<td>110.5854</td>
<td>41</td>
<td>22.10427</td>
</tr>
</tbody>
</table>

Post Analysis

Similar to findings within the preliminary analysis, posttest analysis indicated a significant sex difference between males (Md = 96, n = 15) and females (Md = 119, n = 26), U = 114.5, z = -2.179, p = 0.029, r = 0.34. Also similar to findings from the pretest, there were no significant differences identified in posttest analysis across ethnic groups, $X^2 (3, n = 41) = 1.879$, $p = 0.598$, or class period membership, $X^2 (5, n = 41) = 7.506$, $p = 0.186$. Post analysis findings are summarized in Table 14.
Table 14

*Post Analysis Results for the SE-SSS-R by Sex, Ethnicity, and Class Period.*

<table>
<thead>
<tr>
<th>Categorical Variable</th>
<th>Analysis</th>
<th>Post SE-SSS-R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Mann-Whitney U</td>
<td>114.500</td>
</tr>
<tr>
<td></td>
<td>Z</td>
<td>-2.179</td>
</tr>
<tr>
<td></td>
<td>Asymp. Sig. (2-tailed)</td>
<td>.029</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Chi-Square</td>
<td>1.879</td>
</tr>
<tr>
<td></td>
<td>df</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Asymp. Sig.</td>
<td>.598</td>
</tr>
<tr>
<td>Class</td>
<td>Chi-Square</td>
<td>7.506</td>
</tr>
<tr>
<td>Period</td>
<td>df</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Asymp. Sig.</td>
<td>.186</td>
</tr>
</tbody>
</table>

**Effect Sizes**

Effect sizes for the statistically significant decreases in different subscales are calculated through $\eta^2 = t^2 / t^2 + (N - 1)$ (Pallant, 2007) and evaluated through guidelines proposed by Cohen (1992). The eta squared statistic for perceived teacher support importance (.19), classmates’ frequency of support (.12), and people in school frequency of support (.18) indicate a large effect size (Cohen, 1992). The eta square statistics for close friend frequency of support (.096) indicate a moderate to large effect size (Cohen, 1992). Significant differences seen within decreases in conversation orientation scale of the RFCP yielded an eta squared statistic (0.16), indicating a moderate to large effect size, while a statistically significant decrease between pretest and posttest on the SE-SSS-R resulted in an eta square statistic (.257) suggesting a large effect size (Cohen, 1992).

**Summary of Results**

Significant differences during pretesting were identified for the CASSS-R assessment. Frequency of support from close friends was significantly higher for females
than males. There was no statistical difference across sex groups on the remaining subscales. Additionally, no other statistically significant differences were identified across categorical variables of ethnicity, age, and classroom membership. Results from the paired-samples t-test identified statistically significant decreases in means from pretest to posttest on subscales of perceived teacher support importance, frequency of classmate support, frequency of support from close friends, and frequency of support from people in school. Subscales that remained stable from pretest to posttest include frequency and importance of parental support, frequency of teacher support, importance of classmate support, importance of support from close friends, and importance of support from people in school. Posttest analysis indicated that females rated higher than males on importance of support from people in school. Posttest analysis also indicated significant differences between students in class period 4 from class period 8 on reported frequency of classmate support. No other significant differences were identified through posttest analysis across sex, ethnic, age, or classroom groups.

Preliminary analysis of subscales within the RFCP assessment indicated differences among class period 4 as compared to class period 5 on the conformity subscale. These preliminary differences were not seen within the post analysis, which indicated there were no differences between classrooms. No further statistical differences were identified with preliminary and post analysis on categorical groups such as sex and ethnicity. Treatment effects were identified through a paired-samples t-test. Significant decreases in means from pretest to posttest were ascertained for conversation orientation.

Results from the SE-SSS-R indicated preliminary differences between males and females as females reported greater utilization of success skill behaviors. No significant
group differences were identified across ethnic or class period groups. With regard to treatment effects, mean scores on the SE-SSS-R decreased significantly from pretest to posttest with a large effect size. Sex differences were again identified within post-analysis results as females had a higher median score than males. Group differences were not evident for class period or ethnicity within post-analysis results.
CHAPTER 5 – DISCUSSION

The results identified in Chapter Four by the researcher through a paired-samples t-test indicated significant decreases in students’ perceptions of connectedness to various sources, decreases in conversation orientation within parent-child communication, and decreases in engagement in success skills following participation in the SSS intervention. Within the discussion chapter, the author will provide context for each of the result rendered. From the provided context, implications for the practice of school counseling as well as suggestions for future research are provided. The chapter concludes with an overview of limitations experienced throughout the study’s implementation and analysis and a summary of overall conclusions.

Students’ Perceptions of Connectedness to School

Within the current study, results indicated that students experienced a decrease in perceived connectedness to the frequency at which they experience classmate support, support from close friends, and support from people in their school. These findings contradict previous research on the SSS program with the same middle school population that resulted in increased perceptions of classmate support (Lemberger et al., 2015). The aforementioned study was conducted in the fall term; therefore, it was unable to account for the possible factors of high-stakes testing on school environment. Given that the current study was conducted during the weeks leading up to standardized testing, it is presumed that multiple unmeasured factors impeded study results.

Perceptions of school connectedness have been empirically found to mediate school climate effects in middle school students (Loukas, Suzuki, & Horton, 2006). Specifically, perceptions of connectedness were found to moderate cohesion, friction, and
overall satisfaction at school (Loukas et al., 2006). As school connectedness moderates school climate, the inverse can be examined as well. That is, alterations in school climate impact perceptions of connectedness.

Testing has a tremendous impact on school climate and, therefore, students’ overall perceptions of connectedness. High-stakes testing has also been seen to have an impact on teachers and their practices (Herman, 1993; Huddleston, 2014). Currently, teachers undergo enormous pressures as their students’ achievement outcomes dictates their opportunities for promotion, license renewal, and overall employment (Flanigan, 2015; Huddleston, 2014). Teachers employ methods of teaching that mimic that of the standardized test, often neglecting innovative practices that encourage creativity and critical thinking (Herman, 1993). Students’ scores within the current study did significantly decrease with regard to perception of the importance of teacher support after administration of the SSS intervention. However, given the current educational climate for teachers, it is surprising that students’ results within the current study remained stable for perceived frequency of support from teachers. Additionally, consideration must be made to the middle school students’ schedule. That is, middle school students interact with multiple teachers within one day. Limited interactions, an estimated forty-five minutes per day, a minimal portion being individual interaction, does not provide the student and teacher with ample opportunity to form a meaningful relationship (Demaray et al., 2005).

Middle school students have been found to decrease perceptions of connectedness from sixth grade throughout eight grade (Way, Reddy, & Rhodes, 2007). Other research findings on connectedness identified a significant relationship between classmate support
and academic adjustment (Demaray et al., 2005). Findings are consistent with numerous research studies within the counseling profession linking a classroom to a psychoeducational group. As such, it is surprising within the current study that students reported a decrease in the perceived frequency of classmate support, especially considering the nature of group cohesion within the classroom (Shmuck & Shmuck, 2001) and overall community skill promotion within the SSS intervention (Brigman & Webb, 2010). Such findings contradict those within the literature, especially since psychoeducational groups within the classroom have been viewed as equally if not more effective than small group counseling for adolescents (Shechtman, Bar-el, & Hadar, 1997) as students engage in therapeutic factors with one another, enhancing connectedness with one another within the classroom environment (Yalom & Leszcz, 2005). With regard to empirical research on the SSS program, the classroom intervention has resulted in increased perceptions of connectedness to classmates within a similar population within the same school district a few years prior (Lemberger et al., 2015) and with an urban, predominantly African American population (Lemberger & Clemens, 2012).

In addition to a perceived decrease in frequency of support from classmates, students within the current study also reported a perceived decreased in frequency of support from people within their school. Decreased perceptions of support from people within a school have been found significantly related to students attending higher risk factor schools (Lapan et al., 2014). The current study was conducted within a Title I school within an economically disadvantaged community. The results were expected given that students attend a higher risk school; however, past SSS research has indicated
that such constructs tend to remain stable after intervention exposure (Lemberger et al., 2015).

Research on sources of support have suggested that frequency of support from close friends is a stable construct for most adolescents (Demaray et al., 2005). In past research, perceived support from close friends was positively related to social goal pursuit (Wentzel, 1998). Additionally, support from close friends translated into acts of appraisal (Malecki & Demaray, 2003). Considered in context with the current study, students’ perceived frequency of support from their close friends declined significantly after intervention exposure. Such findings are unexpected considering supporting literature on the adolescent perceptions of peer support (Demaray et al., 2005; Malecki & Demaray, 2003; Wentzel, 1998). Within past SSS research, perceptions of support from close friends remained stable (Lemberger et al., 2015), further indicating the peculiar nature of such results. However, perceptions of support in nature can fluctuate minute to minute and are a product of numerous external factors. Perceptions of stability within peer relationships has been found to be less stable within pre-adolescent sixth grade students (Degirmencioglu, Urberg, Tolson, & Richard, 1998).

While students experienced significant decreases from some sources of support, others remained stable from pretesting to posttest. Such results are consistent with other investigations of social support among middle school students; while some sources may change considerably over a short period of time, other sources remain stable (Malecki & Demaray, 2003; Richman et al., 1998; Wang & Eccles, 2012; Wentzel, 1998). Changes were not seen within students’ perceptions of frequency and importance of parental support. Additionally, there were no changes found within students’ perceptions of the
importance of their relationships with teachers, close friends, classmates, and people within their school. These findings are consistent with other research on the SSS program on perceptions of connectedness (Lemberger & Clemens, 2012; Lemberger et al., 2015). Such results indicate the consistency and stability of the aforementioned relationships. However, the complex nature of the stable parent-child relationship is discussed further within results from the Revised Family Communication Patterns assessment (Fitzpatrick & Ritchie, 1994).

**Students’ Perception of Parent-Child Relationship**

Parents-children communication is considered an underlying indicator of family functioning (Fitzpatrick & Ritchie, 1994). Student scores on the RFCP assessment were interpreted by using the median possible score as the differential point in determining if the score is high or low. For conversation orientation, this median raw score was 30 while conformity orientation median raw score was 22. Families are categorized based on a high or low orientation on each scale. High scores on both conformity and conversation scale categorize families as consensual families while low scores on both scales is categorized laissez-faire. High ratings on conversation orientation and low conformity orientation are considered pluralistic families; in contrast, high conformity orientation and low conversation orientations are considered protective. Assessment interpretations are provided in Table 15.
Table 15

*RFCP Scoring Interpretations.*

<table>
<thead>
<tr>
<th>Conversation Orientation</th>
<th>Conformity Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>High (75 – 45)</td>
<td>Consensual</td>
</tr>
<tr>
<td>Low (45 – 15)</td>
<td>Pluralistic</td>
</tr>
</tbody>
</table>

Regardless of significant decreases in student’s scores on the conversation orientation scale, students within the current study rated parent-child communication during pretest and posttest as high on both conversation orientation and conformity orientation. Such scores categorize students’ interpretations of their parent-child relationships as consensual. Consensual families are characterized as “expressing strong pressures toward agreement even as they encourage children to take an interest in ideas and to express their feelings” (Fitzpatrick & Ritchie, 1994, pp. 279-281). In dealing with conflict, consensual adolescent-parental relations openly express negative feelings in addition to eliciting social support from one another (Koerner & Fitzpatrick, 1997). While members feel secure enough in their parental relationships to voice themselves, they also seek to avoid conflict to maintain conformity within the system (Koerner & Fitzpatrick, 1997).

Findings from the current study are consistent with numerous research studies investigating adolescent relationships with their parents. Adolescents have been found to over-attribute controlling thoughts about their parents’ practices (Sillars et al., 2010). As seen within the results, perceptions of over-controlling parenting practices translated into
high scores on conformity orientation (Sillars et al., 2010). Additionally, highly controlling parents typically elicit perceptions from adolescents that they are unheard within their household, yielding low conversation orientation scores (Koerner & Fitzpatrick, 1997). Uniquely, within the current study, middle school students rated their child-parent relationship as high on both orientations.

Given that the sample population identifies as predominantly Hispanic, the literature has also showed how children within Hispanic families rate higher perceptions of respect towards their parents than European American children (Dixon, Graber, and Brooks-Gunn, 2008), which would account for higher conformity ratings from middle school students. Additionally, Hispanic parents have reported higher levels of public and anonymous prosocial behaviors (Carlo et al., 2011). That is, middle school students from Hispanic American families are more likely to practice high conformity orientations while in public and towards strangers (Carlo et al., 2011), which provides further support for current results of high ratings of conformity orientation.

**Students’ Engagement of Student Success Skills**

Students within the current study reported a significant decrease in success skill engagement after treatment exposure. As supported by concepts from the Dunning-Kruger effect, individuals are more likely to inflate their self-assessment when they are unaware of the construct being measured (Kruger & Dunning, 1999; Stone & May, 2002; Williams & Gilovich, 2008). Through four research investigations, Kruger and Dunning (1999) identified how incompetence impacts poor performance and the inability to recognize poor performance. To determine whether the Dunning-Kruger effect is accurate, numerous studies have been conducted to propose alternative hypotheses and
identify influential factors. For instance, Williams and Gilovich (2008) conducted a study to determine whether individuals fully believe their self-inflated scores or knowingly self-inflate, finding that individuals are unaware of their self-overestimations. In specifically investigating this phenomenon in adolescent students with and without learning disabilities, Stone and May (2002) investigated overestimation of academic ability and metacognitive awareness. Results indicated that both students with and without learning disabilities rate their academic performance lower than their actual ability (Stone & May, 2002). Compared to each group, students with learning disabilities overestimated their abilities to a greater extent than students without learning disabilities (Stone & May, 2002).

Results from investigations on the Dunning-Kurger effect indicated that metacognitive skills had a great effect on incompetence (Kruger & Dunning, 1999). Additionally, findings suggested that improvements in metacognitive skills improve accuracy of self-assessments (Kruger & Dunning, 1999). As discussed within the SSS study on 7th grade students from a similar population years prior, the SSS intervention was seen to impact metacognitive skills such as working memory, plan, and organization of materials (Lemberger et al., 2015). Given the evidence from past SSS studies (Lemberger & Clemens, 2012; Lemberger et al., 2015) and conceptualizations from Dunning and Kurger (1999), findings from the current study suggested that students may have inflated scores on their initial assessments due to lack of metacognitive ability and overall lack of awareness of their utilization of the assessed skill sets.

The identified suppositions are further supported by extensive research on the inverse effect: those whom become more aware tend to underestimate their abilities on
self-report measures (Kruger & Dunning, 1999). While outcomes on the SE-SSS-R in the current study decreased significantly after administration of the intervention, it could be assumed that, at the time of pretesting, students were incompetent regarding their success skill engagement. Given the findings from past SSS empirical investigations (Lemberger & Clemens, 2012; Lemberger et al., 2015), the intervention may have led to an unmeasured gain in metacognitive ability, increasing students’ awareness of ability as reflected in self-responses.

A regression towards the mean could be another possible explanation for the significant decrease in perceived utilization of student success skills. That is, students whom participated in the study had the task of taking home the consent form, discussing implications with their parents, obtaining a signature, and returning the consent form to school in a timely manner. Such undertaking would typically be completed by a student that already actively utilizing success skill sets. Essentially, the students whom participated in the study could represent students whom practice success skills on a regular basis as participation required behaviors similar to completing and returning a homework assignment. Regression towards the mean is likely to occur when investigating variables that are subject to fluctuation within an individual (Yudkin & Stratton, 1996). Perceptions of success skill engagement in nature can fluctuate minute to minute and are a product of numerous external factors that were not controlled for within the study.

Current research on the SE-SSS-R assessment supports construction, instrument validity, and reliability (Carey et al., 2014). While the assessment has been administered to a wide-scale population, limited psychometric properties have been identified thus far.
While the current study does not provide a large enough sample to draw conclusions, findings did indicate differences between sexes as females rated significantly higher engagement in success skills than males. Sex differences are evident within research investigating achievement skills within middle school students (e.g., Meece et al., 2006; Pajares & Valiante, 2001). Specifically, differences have been identified amongst sexes as performance goals for males are positively correlated with self-efficacy and self-concept and not for females (Pajares & Valiante, 2001). Considered in the context of the current study’s results, questions within the SE-SSS-R assessment could target skillsets that are more typically employed by females rather than males. Nonetheless, further research is required to determine psychometric properties for the assessment, especially with regard to differences amongst sex and ethnicity.

**Implications**

School counselors are specifically trained to provide direct and indirect services that benefits every member’s social and emotional wellbeing, academic outcomes, and career/vocational opportunities (ASCA, 2012). Numerous school counseling educators have identified how the utilization of the ASCA National Model (2012) can best support the practicing school counselor in effectively providing services given the current educational climate (Dahir, 2004; Dollarhide & Lemberger, 2006; Sink & MacDonald, 1998). Student outcomes from treatment effects within the current study do not definitively indicate a causal relationship between perceptions of connectedness and environments of high-stakes testing. However, the context in which data for the current study were ascertained speaks to the need for school counselors to advocate for their students beyond the school system. Consistent with recommendations from Dollarhide
and Lemberger (2006), results from the current study support school counselor practices of advocating for their students within a systemic and political capacity (Lewis, Arnold, House, & Toporek, 2002).

Thus far, the SSS program has been used as a tool to assist the school counselor in providing such support to students and teachers by building skills related to success through effective counseling interventions (Brigman & Webb, 2010). The school counselor at the middle school within the study decided to use the SSS program from supportive findings acquired years prior (Lemberger et al., 2015). While the current study did not necessarily support the SSS intervention, findings continue to support the practice of data-driven decision making by the professional school counselor within the public education system. Too often, school counselors are reliant upon the programs offered as most empirically supported interventions are costly and require time-consuming training to become an effective intervention administrator. Findings from the study indicate that the intervention may not have been effective with the current population as well as indicate that larger issues need to be addressed by the school counselor. However, without administering the intervention and collecting data, the school counselor would have been completely unaware of intervention effects. Thus, school counselors need to maintain accountability practices by measuring the effects of their implemented school counseling curriculum to further inform their practice (Dollarhide & Lemberger, 2006; Gysbers, 2004; Isaacs, 2003).

With regard to the practice of data-driven accountability, school counselors need to maintain awareness of the chosen assessments administered. The current study reflected a significant decrease in students’ reported engagement in success skills. Given
the literature on the Dunning-Kurger effect (Kruger & Dunning, 1999), students who are unaware of what they are being asked are found to inflate their self-reports, so the practicing school counselor must be aware of such effect when administering any form of assessment to a population. While it is preferable to administer valid and reliable assessment measures, the language concepts being asked need to be comprehensible to the assessed population.

Results regarding perceptions of parent-child communication revealed a complex dynamic that is reflective of both sex and ethnic cultural considerations. Given the supported impact parental relationships have on student success outcomes (Bronstein et al., 1996; Dishion, Nelson, & Bullock, 2004; Fan & Williams, 2010; Murray, 2009) and theoretical considerations from Individual Psychotherapy (Adler, 1964; Dreikurs, 1962), school counselors should administer interventions that engage parental support. Parental engagement within the school setting has been a difficult feat, as evidenced by the limited number of empirical investigations on parent education programs (Huhn & Zimpfer, 1989; Pfannenstiel & Seltzer, 1989; Powell, 1986; Wood & Baker, 1999). Based on the premise of the SSS program (Brigman & Webb, 2010) and Individual Psychotherapy (Adler, 1964; Dreikurs, 1962), as parents and students engage in the same intervention material, there is an assumed connectedness that occurs purely by interaction and exposure. Based on the results from the current study, the author urges school counselors to engage in practices that transcend the school environment to enhance all students’ sources of support.

Limitations
Numerous limitations occurred within the construct of this study. While the SSS intervention was intentionally administered during the weeks leading up to high-stakes testing, the study could neither control for nor measure the impact of high-stakes testing on the general population. Specifically, on the date posttests were administered, numerous students at the school partook in peaceful protests with regard to the upcoming high-stakes tests. Students were encouraged to participate in protests by their teachers, yet they received threatening messages from the school administration via the local news and letters sent home to parents. School communications during this time can be seen in Appendix A. Such limitation could have been counteracted through the study design having a control group.

The sample size within the current study is considered an additional limitation as it represented 28% of the identified population. Coupled with overall study design with only pretest and posttest measurements and no control group increase the possibility of a regression towards the mean. A regression towards the mean is more likely to occur when measuring variables that fluctuate (Yudkin & Stratton, 1996). As each of the variables measured within the study are self-reports, they are even more likely to fluctuate given influences of external factors. Since the sample size was so small, precautions within the analysis to account for possible regression towards the mean was not able to be conducted. Consequently, it is possible that the sample is not an accurate depiction of the actual population.

Additional limitations include the lack of psychometric data on the SE-SSS-R assessment. While results from the current study further knowledge of how this assessment is utilized within a rural, predominantly Hispanic population, interpretations
of results are difficult due to the lack of research to ground current findings. Such factors such as language barriers could have influenced the occurrence of the Dunning-Kruger effect within study results (Kruger & Dunning, 1999).

The SSS intervention was administered during social studies classes once a week for five weeks. Social studies classrooms are considered all inclusion, meaning the sampled students are a combined representative of general education, special education, dual language, and English language learners. While this is a general representation of all schools in New Mexico, demographic information was not collected regarding student educational classifications. Such demographics would enhance the results, especially with regard to interpretation of the SE-SSS-R assessment and consideration for dual-language households.

Administrative support within the school and district was viewed as another limitation to the current study. Informing students and parents about study participation was a lengthy process as school administrators were reluctant to send out information through administrative offices to notify parents directly rather than word-of-mouth from the student. Such lack of support translated into the number of students who returned signed consent forms. Support from the school administration possibly could have yielded a larger sample size as study information could have been disseminated more broadly.

**Recommendations for Future Research**

Results from the current study provide insight into the complex nature of the parent-child relationship and reveal potential for school counseling interventions that can transcend the school to impact familial relationships at home. However, further
investigation is warranted into the nature of the parent-child relationship and the impact school counseling interventions can have on the familial system. Findings from the RFCP indicate the rigidity and the power parents have in establishing parent-child communication patterns. While school counseling interventions can attempt to effect change within the student that transitions into the home environment, there is a need to establish and investigate school counseling initiatives that can intervene in the parental subgroup. Such a need is further supported within the theoretical disposition of Individual Psychology through the call for parental re-education (Adler, 1964; Dreikurs, 1962).

Given the results from the SE-SSS-R, future research on the psychometric properties for this assessment are greatly needed. Further investigation of sex differences, wider exposure to different ethnicities, and cultural epicenters across the United States and abroad would widen knowledge and understanding of success skill engagement across differing populations. Additionally, creators of the SE-SSS-R offer general uses for assessment within school counseling practices (Carey et al., 2014). Further support is needed from the administration and use of the assessment for the practicing school counselor, especially with regard to meeting the needs of specific student populations.

While direct implications cannot be drawn based on the research design, results implicate the dire need to investigate the effects high-stakes testing is having on the social, emotional, and academic outcomes of students. Research has identified how students from low socioeconomic households are at greater risk of failing standardized tests, increasing their risk for retention and possible drop-out from school (Rumberger, 1995). Given that high-stakes testing is the current political culture nationwide, school counselors especially need to be aware of the impact such culture has on the school
community and individual students. Such information can then be used to inform practical application of effective interventions.

**Summary and Conclusions**

This study intended to investigate the effect of the Student Success Skills program on perceptions of school connectedness, parent-child relationships, and engagement in success skills within middle school students. Results indicated that a student’s perceptions of supportive relationships from classmates, close friends, and people declined from pretest to posttest. While findings contradict those of past SSS studies within a similar population (Lemberger et al., 2015), factors external to the study have been suggested to have high impact upon yielded results. Results highlighted an essential need to further investigate the impact of high-stakes testing on the school community and individual needs of the student.

Significant differences were identified within reports of parent-child communication patterns. However, such significant differences within scores did not effect change upon how communication style indicated type of parent-child relationship. Results from the study indicate that students perceive their parent-child relationships as consensual, high in both conversation orientation and conformity orientation. Findings from this study are consistent with other investigations on predominantly Hispanic populations (Carlo et al., 2011; Dixon, Graber, and Brooks-Gunn, 2008) and adolescents (Koerner & Fitzpatrick, 1997; Sillars et al., 2010). Based on these results and the complexity of parent-child relationships, further research is needed for school counselor-administered interventions that can effectively intercede within familial functioning by engaging the student, parent, and school system.
In tandem with supporting literature on the Dunning-Kruger effect (Kruger & Dunning, 1999), students potentially responded to the SE-SSS-R with inflated self-assessment. As students learned the skills measured within the assessment, their scores were then deflated within posttest results (Kruger & Dunning, 1999). Implications from the current study call for increased investigation into the psychometric properties of the SE-SSS-R to support data-driven school counseling practice.

Overall, the current study further supports effective school counseling from data-driven decision making to implementing empirically supported interventions that target the entire school system.
February 26, 2015

Dear Parents and Guardians,

As we get ready to embark on the new PARCC test, we would like to share some information with you. We hope that you find this information useful as you help us prepare your students.

How long will my child be testing?

This depends on the grade level of your student. Schools will be testing grade levels based on a testing schedule. In general, students will take 3 sessions of English Language Arts (ELA) and 2 sessions of Math. These sessions are timed and spread out over 3-5 days. This allows teachers time to continue instruction, even on testing days.

What will my child be doing when they are not testing?

The testing schedule allows students and teachers to continue teaching and learning throughout the entire process. Classes will be continuing as normal every day, including days that your child will be testing.

How is the PARCC test different from testing my child has done in the past?

The PARCC test was designed to fit with the recently adopted Common Core Standards that guide the teaching and learning in the classrooms. It is similar to the SBA test, Terra Nova test, and Iowa Test of Basic Skills (ITBS) that students have been taking for more than 20 years. The PARCC test is computerized and designed to give students, parent and teachers a better understanding of what students have learned in the classroom and what still needs more work.

Does my high school age child need this test to graduate?

In order for a student to graduate high school in New Mexico with a DIPLOMA, they must meet the academic requirements set by the New Mexico Public Education Department. Part of these requirements are that students receive a proficient score in ELA, Math and Science. There are alternative ways to show this proficiency, however these alternate pathways are not available for students until they have attempted all required administrations of the PARCC test.

Students who are unable to meet the graduation requirements may still be eligible for a Certificate of Completion. A Certificate of Completion may limit future opportunities for students.

How does the PARCC test help my child’s school district?
School districts in New Mexico are required to administer the PARCC test to 95% or more of all students. This requirement must be met to continue receiving federal funding. Belen Consolidated Schools receives more than $4 million dollars a year in federal funding. This funding provides students with books and computers, tutoring and summer programs as well as support in the classrooms with counselors and specialists.

Can I “opt” my child out of PARCC testing?

New Mexico Public Education Department and the Belen Consolidated School District do not have policies that allow students to “opt” out of the testing.

What happens if I keep my child home during the PARCC test?

Teaching and learning will continue every day during the testing window. Any absences during this time will be handled in accordance to our attendance policy. Keeping your child home for the purpose of not taking the PARCC test would not qualify as an excused absence.

What happens if my child participates in a “walk out” or similar type of demonstration?

School rules apply in these situations and because teaching and learning will be continuing during this entire process a disruption in the educational process will not be tolerated. It is also important to note that Belen Consolidated Schools cannot be responsible for student’s safety and security if they leave our campus. We encourage students to appropriately voice their opinions through the use of petitions and letter writing campaigns.

Belen Consolidated Schools is working hard to make sure that your child will have a positive testing experience. We look forward to continuing the partnerships that we have built with you and hope this information is useful to you during this time. If you have any questions please let us know, thank you!

Sincerely,

Acting Superintendent
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