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Resilience and Internalizing Symptoms among Adolescent Girls in Residential Treatment: An Evaluation of Strong Teens

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ABSTRACT

Resilience and Internalizing Symptoms Among Adolescent Girls in Residential Treatment: An Evaluation of Strong Teens

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Strong Teens is an evidence-based social and emotional learning (SEL) curriculum designed to target internalizing disorders by promoting emotional resilience and social competence. In this study, *Strong Teens* was implemented among 36 adolescent girls during group therapy in a residential treatment center (RTC). A non-equivalent, quasi-experimental wait-list control group design was used. The curriculum was evaluated by tracking the girls' social and emotional knowledge, internalizing symptoms, and resilience from the perspectives of the girls, group therapists, and a supervisor who was blind to the study. Although the results indicated that exposure to *Strong Teens* was not effective in increasing the social and emotional knowledge of the girls, statistically significant reductions in internalizing symptoms and statistically significant gains in resilience were reported. Treatment fidelity checklists were filled out during 31% of the lessons where it was observed that the average lesson time was 30.11 minutes and 62% of the lessons' components implemented with integrity. In addition, group therapists completed a social validity questionnaire after the completion of the lessons in which they agreed with the goals and procedures of the curriculum, were neutral with the outcomes, and generally reported that the curriculum helped the girls facilitate better awareness of linking thoughts, feelings, and behaviors as well as helping them better understand empathy and improved peer interactions. They also indicated that the curriculum was "too basic" and wished it would have had more tailored specifics for their population. It is recommended that future research with this population investigate which SEL topics are most suitable, identify the most favorable lesson time, and explore student perspectives and experiences with *Strong Teens.*

Keywords: social emotional learning, residential treatment, adolescents, internalizing, resilience

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INTRODUCTION

Statement of Problem

The prevalence of mental illness among adolescents is increasing (Greenberg, Domitrovich, & Bumbarger, 2001; Walker, Ramsey, & Gresham, 2004). Just over 22% of adolescents from the ages of 13 to 18 have been found to experience a mental illness with severe impairments and/or distress (National Comorbidity Survey-Adolescent, 2010). Hoagwood and Johnson (2003) indicated that only 20% of adolescents receive adequate treatment; of those who receive treatment, 70–80% are treated at school.

Adolescents who do not respond to interventions in schools or comply with conventional forms of treatment often fail out of these treatments and are placed in lock-down, controlled facilities known as residential treatment centers (RTCs; Trout et al., 2008). RTCs have been described as one of the most restrictive settings for adolescents (Child Welfare League of America [CWLA], 2006). RTCs have been considered a "last resort" for high-risk youth who have been unable to adapt or adequately respond to other less restrictive treatment programs (Frensch & Cameron, 2002; Trout et al., 2008).

Adolescents in RTCs have been identified as having severe emotional and behavioral disturbances as well as significant deficits in their social competencies (Frensch & Cameron, 2002; Wells & Whittington, 1993). According to the CWLA (2006), of the youth who entered RTCs, 93% had a psychiatric diagnosis, 38% reported suicidal ideation, and 51% had histories of involvement with crime. Further, roughly 68% of adolescents in RTCs have been found to be in the borderline or clinical range for internalizing disorders (e.g., anxiety, depression, somatization, social withdrawal), while nearly 80% are within the clinical range for externalizing disorders (e.g., conduct problems, aggressive behaviors, rule breaking, drug use (Trout et al.,

2008). Successful outcomes for adolescents are significantly correlated with protective factors (e.g., self-regulating abilities, attachment with others, pro-social behaviors, familial and staff support), which ultimately promote their resilience (Alvord & Grados, 2005).

Resilient youth have been described as possessing certain skills, attributes, and abilities that enable them to adapt to hardships, difficulties, and challenges (Pargas, Brennan, Hammen, & Le Brocque, 2010). Although some resilience factors seem to have biological influences, many researchers believe that resilience skills can be taught and/or strengthened (Alvord & Grados, 2005; Luther & Cicchetti, 2000; Pargas et al., 2010; Reivich & Shatté, 2003). If high-risk youth who enter the treatment of last resort have largely been unable to adapt to their challenges or respond positively to their environments, then perhaps learning resilience skills may provide a catalyst for positive changes.

Werner and Smith (2001) conducted a study over four decades of high-risk infants born into poverty on the Hawaiian island of Kauai. They found that even those who were still troubled as adolescents were able to successfully change the course of their lives. They discovered that adolescents who were able to learn new skills and better navigate problematic relationships with peers were more likely to experience a successful change.

It is important to note that there is no single intervention capable of completely overhauling the life of an adolescent, due to the convolution of each individual and his or her environmental interactions (Burns & Hoagwood, 2002; Murray, 2003; Todis, Bullis, Waintrup, Schultz, & Ambrosio, 2001; Walker & Bullis, 1995). However, evidence-based social-emotional learning (SEL) programs have shown significantly positive outcomes in a variety of studies with children and adolescents (Caldarella, Christensen, Kramer, & Kronmiller, 2009; Greenberg, 2000; Greenberg, Domitrovich, & Bumbarger, 2001; Kramer, Caldarella, Christensen, &

Shatzer, 2010; Merrell, Gueldner, & Tran, 2008; Payton et al., 2000). These programs have been developed and are intended to help individuals learn a broad range of skills and techniques that promote mental health and resilience (Greenberg et al., 2003; Zins, Weissberg, Wang, & Walberg, 2004). Additionally, SEL programs are designed to teach social, emotional, and life skills that serve to prevent negative life outcomes (Weissberg, Kumpfer, & Seligman, 2003). In short, SEL programs may provide significant benefit to adolescents in RTCs, though this has not been adequately explored in the literature.

Research Purpose

The aim of this study was to evaluate the effectiveness of the *Strong Teens* SEL curriculum among adolescent girls in a RTC. To date, *Strong Teens* has been implemented in a treatment facility with high-risk adolescents on one occasion (Isava, 2006). *Strong Kids,* the companion curriculum designed for students ages 5–12, has also been implemented once in a RTC (Berry-Krazmien & Torres-Fernandez, 2007). Both studies produced encouraging outcomes; however, both had a small number of students.

In this study, the *Strong Teens* curriculum was administered to 36 adolescent girls once a week during group therapy. The study addressed the five following research questions:

1. Does the *Strong Teens* SEL curriculum significantly increase social and emotional knowledge in adolescent girls with internalizing symptoms in a RTC?
2. Does the *Strong Teens* SEL curriculum significantly increase resilience in adolescent girls with internalizing symptoms in a RTC, as measured by the Social and Emotional Assets and Resilience Scale (SEARS)?

3. Does the *Strong Teens* SEL curriculum significantly decrease internalizing symptoms in adolescent girls with internalizing symptoms in a RTC, as measured by the internalizing sub-scale of the Social Skills Improvement System (SSIS)?
4. Are RTC therapists able to implement the *Strong Teens* curriculum with fidelity?
5. Do therapists perceive the implementation of *Strong Teens* as socially valid for adolescent girls with internalizing symptoms in RTCs?

LITERATURE REVIEW

State of Adolescent Mental Health

Adolescence is a dynamic transitional period from childhood to adulthood where a variety of physical, cognitive, and social changes take place. Many of these developmental processes and changes occur relatively quickly, which can make it difficult for adolescents to successfully adapt to their internal and external environments (Kazdin, 1993). Along with the developmental changes, adolescents also have the added pressure to transition to adulthood, which can seem an uncertain and ambiguous expectation (Dockery, Li, & Kendall, 2009). Thus, adolescents are often considered a vulnerable population (Osgood, Foster, & Courtney, 2010).

There has been an increase in mental illness among adolescents over the past several decades (Collishaw, Maughn, Goodman, & Pickles, 2004; Rutter & Smith, 1995). Presently, around 22% of adolescents experience a mental illness with severe impairment (National Comorbidity Survey-Adolescent, 2010). According to Kauffman (2005) the peak onset of mental disorders is age 14. Unfortunately, 80% of these youth do not receive adequate treatment (Hoagwood & Johnson, 2003). Although there is a great need for adolescent mental health services, there is an enormous gap between needs and resource availability (Kieling et al., 2011). Because so many adolescents experience mental illness, and most do not receive treatment, it is not surprising that the third leading cause of death among adolescents is suicide (Belfer, 2008). Belfer estimated that at least 50% of all adult mental illnesses onset during the adolescent years.

Some predictors of persisting mental disorders among adolescents were uncovered in a 4-year longitudinal study. In this study, Offord et al. (1992) found that troubles with peer relationships and family dysfunctions were the greatest contributors to the persistence of a

mental disorder, regardless of the type of disorder. If this is the case, then addressing social-emotional skills may be a viable intervention or component for treating adolescents.

Unfortunately, while the prevalence of mental illness among adolescents trends upwards, the overall empirical attention the adolescent population receives is scant in comparison to that of children and adults (Kazdin, 1993; Simmel, 2012). Moreover, adolescence is a critical time period where mental illnesses are common, severe, and potentially lethal to those who suffer.

In practice, youth with mental illnesses receive mental health services and diagnoses based on both a medical model and an educational model. While both models are congruent with much of their practices, the medical model focuses more on the reduction of everyday symptoms through therapeutic and medicinal supports (Antaramian, Scott-Huebner, Hills, & Valois, 2010). The educational model is concerned more with the external and internal behavioral functioning of youth particularly in the school setting (Kauffman, 2005). In the schools adolescent mental health is categorized broadly as emotional and behavioral disorders (EBDs), which are subdivided into two categories, externalizing disorders and internalizing disorders (Kauffman, 2005).

Emotional and Behavioral Disorders

The definition and parameters of EBDs have received much scrutiny over the past several decades due to matters of terminology, specificity, clarity, limitations, and usefulness (Kaufman, 2005). However, a more agreeable, workable, and inclusive definition has emerged in recent years. According to the National Archives and Records Administration (2011), the Code of Federal Regulations defined EBDs as "conditions in which a child's behavioral or emotional responses are so different from those of the generally accepted age-appropriate norms of children

with the same ethnic or cultural background as to result in significant impairment in social relationships, self-care, educational progress, or classroom behavior" (code 1308.8).

In order to be classified with an EBD, youth must experience one or more of the following with enough frequency, intensity, or duration as to require intervention: (a) seriously delayed social development including an inability to build or maintain satisfactory interpersonal relationships with peers or adults; (b) inappropriate behavior (e.g., dangerously aggressive toward others, self-destructive, severely withdrawn, non-communicative); (c) a general pervasive mood of unhappiness or depression or evidence of excessive anxiety or fears (e.g., frequent crying episodes, constant need for reassurance); (d) receive a professional diagnosis of serious emotional disturbance (Code of Federal Regulations, 2011). The eligibility decision must be based on multiple sources of data, including assessment of the child's behavior or emotional functioning in multiple settings. The evaluation process must also include a review of a physical examination to eliminate the possibility of a misdiagnosis due to an underlying physical condition.

Kauffman et al. (1995) reported that 6% to 10% of students have emotional or behavioral problems severe enough to impede their development and require treatment in order for them to adequately function in school. Youth who are diagnosed with EBDs are often stigmatized by peers, teachers, and family members; they also reportedly receive less social support and are viewed as being less popular (Moses, 2010). Adolescents with EBDs have been found to be less developed socially and have weaker problem-solving skills when compared to peers (Davies & Vander Stoep, 1997). Walker, Colvin, and Ramsey (1995) noted that youth with EBDs have significant deficits in a broad range of social skills (e.g., communicating needs, lacking

knowledge of social rules and appropriate manners, engaging in disruptive behaviors, having an inability to appraise social situations correctly).

Although youth with EBDs experience many social and emotional difficulties and deficits, there have been promising findings suggesting that these youth can improve through social and emotional interventions (Bierman et al., 2010; Marchant, Brown, Caldarella, & Young, 2010; Sawyer et al., 1997). In a meta-analysis of interventions designed for students with EBDs, the authors recommended that the best outcomes for students should be expected when the curriculum is refined and customized to the specific population (Quinn, Kavale, Mathur, Rutherford, & Forness, 1999). Simpson, Peterson, and Smith (2012) further argued that it is essential to evaluate components, outcomes, and the progress of programs designed for youth with EBDs. Thus, programs and curriculums for youth should be tailored to the specific needs of the youth and should be evaluated and supported empirically.

Many students with EBDs are easier to detect and classify when they have an externalizing disorder (e.g., conduct problems, aggressive behaviors, rule breaking, drug use). However, when they have an internalizing disorder (e.g., anxiety, depression, somatization, and social withdrawal), oftentimes their symptoms can go undetected, and therefore untreated, for a long period of time (Ghandour, Kogan, Blumberg, & Perry, 2010). When students with internalizing disorders do not receive appropriate early interventions, their disorders can at times become so severe that traditional approaches are ineffective when attempted, and the student may end up in a RTC, the treatment of last resort (Frensch & Cameron, 2002; Trout et al., 2008).

Internalizing Disorders

Internalizing disorders represent a broad domain of psychological disorders where nearly unobservable symptoms reside within the individual (Reynolds, 1990). Internalizing has been

described as the propensity to express distress inward (Cosgrove et al., 2011). The major categories of internalizing disorders include depression, anxiety, social withdrawal, and somatic complaints (Merrell, 2001). The two most common internalizing disorders for adolescents are depression and anxiety with a prevalence of 2–5% and 6–11% respectively (Colman, Wadsworth, Croudace, & Jones, 2007). They occur more frequently in girls than boys, are more common during the adolescent years, and frequently co-occur with other mental disorders (Ghandour et al., 2010). In fact, after the age of 15, females are twice as likely to have depression when compared to males (Nolen-Hoeksema & Girgusm, 1994).

These disorders are typically inner-directed and over-controlled (Isava, 2006), inner-directed meaning the symptoms are internally manifest within the individual and over-controlled because they require an immense amount of maladaptive self-control. Internalizing disorders are more likely to go unnoticed and untreated during childhood and adolescence because it may be difficult for youth to communicate internal feelings and others may not be directly impacted by the symptoms (Ghandour et al., 2010). Since the symptoms are often covert, they are regularly overlooked by teachers, parents, and peers. Further, when symptoms come to the surface, pinpointing an accurate diagnosis and putting together an adequate treatment plan often becomes an elusive task for clinicians (Oswald & Mazefsky, 2006).

According to Ollendick and King's (1994) meta-analytic review of internalizing disorders, specific internalizing disorders fluctuate with age. Separation anxiety disorder and simple phobias are most prevalent among younger children; whereas, general anxiety, depression, and social phobias are most common for adolescents. Encouragingly, Ollendick and King's review also found that 34–56% of internalizing adolescents were able to break free from their internalizing symptoms without treatment. However, for the remainder their disorders

persist, even though the expression of the disorder may transform over time. For example, in an evaluation of 40-year psychiatric outcomes for adolescents with internalizing disorders, Colman et al. (2007) found that 70% who had an internalizing disorder at age 13, and also at age 15, had a persisting mental disorder into their 30s, 40s, or 50s. Interestingly, for the adolescents who only had an internalizing disorder at age 13, but not at age 15, just 33% had a persisting mental disorder in their 30s, 40s, or 50s. Thus, if an internalizing disorder persists into adolescence it is a major contributor to an enduring mental health disorder throughout adulthood. Therefore, targeting and treating internalizing disorders during adolescence could be a critical juncture, because it may have preventative and long-lasting effects.

Youth with internalizing disorders also appear to develop and maintain their disorders due to a failure to attain important socio-developmental milestones (Oland & Shaw, 2005). For example, not being able or willing to form healthy relationships with others may contribute to social withdrawal and depression, and if these skills/abilities are not learned or practiced, then internalizing traits may worsen. Seligman and Ollendick (1998) captured this idea in what they described as a "pure" internalizing disorder; they postulated that high anxiety coupled with high behavioral inhibition could result in withdrawal and avoidance, which could maintain and intensify the disorder. For example, if someone with agoraphobia feels their anxiety reduce when they choose not to go outside for the day, then it will become easier for them to make the same decision the next time they begin to experience their social fears. Continuing this process will only deepen their disorder over time. Thus, internalizing disorders may be self-perpetuating and could intensify if left untreated.

It has also been speculated that internalizing symptoms could create unconstructive expectations in relationships and socially avoidant response styles, which could lead the

adolescent to be unresponsive or unaffected when given helpful feedback (Oland & Shaw, 2005). For example, someone with depression may initially want a family member or friend to notice their suffering and reach out to them. If the depressed person feels they are never noticed or reached out to, then overtime, they may begin to avoid their loved ones and/or reject any of their concerns. Keiley et al. (2003) identified this lack of adaptability and responsiveness in youth with internalizing disorders as temperamental rigidity. This suggests that the very nature of internalizing disorders can make change a slow and difficult process for the adolescent. In contrast, many researchers advocate that there are some resilient youth with internalizing disorders who learn to cope with their conditions, overcome their challenges, and thrive (Alvord & Grados, 2005; Luther & Zigler, 1991; Masten, Best, & Garmezy, 1990; Pargas et al., 2010). Resilience research focuses on strengths instead of deficits, and it has become an emerging area of research in the social sciences (Neuman, 2009).

Resilience

Roots of resilience research. The pioneers of resilience research unintentionally began to identify this phenomenon by studying children at risk for mental illness in an attempt to understand the causes of disorders (Masten & Tellegen, 2012). Rutter (1989) was studying the disorders of children and adolescents on the Isle of Wight and in inner-city London when he began to recognize common protective factors for youth who did not seem to be adversely affected by harsh circumstances (Rutter, 1989). He described protective factors as "influences that modify, ameliorate, or alter a person's response to some environmental hazard that predisposes to a maladaptive outcome" (Rutter, 1985, p. 600). Rutter (2006) expressed that resilience has its origins in the universal findings from all research.

Similarly, Werner and Smith (1982) set out to study an at-risk population. They followed 700 participants who were born in 1955 on the Kauai island of Hawaii from the prenatal period to middle age. Although these children had been exposed to a multitude of adversities (e.g., poverty, perinatal stress, parental psychopathology, family discord), they noticed that some not only survived but thrived and became successful adults. The four main common attributes found among the resilient in the Werner and Smith study were (a) social competence, (b) independence or autonomy, (c) problem-solving skills, and (d) a sense of purpose or future (Cohu, 2005). Werner and Smith (1992) noted that protective factors may arise within an individual (e.g., temperament and intelligence), from the family (e.g., parenting style and sibling support), or from the community (e.g., friendships and school support).

In the 1970s and early 1980s, research from the University of Minnesota on children and youth who were at risk for the development of psychopathologies blossomed into a scholarship known as Project Competence (currently known as the Project Competence Longitudinal Study) after researchers realized the significance of the variability among those who were at risk for psychopathology (Garmezy, Masten, & Tellegen, 1984; Masten & Tellegen, 2012). Afterward, they began to focus on identifying the patterns of resilience and competencies in young people, and akin to Rutter (1989) and Werner and Smith (1982), they identified several common protective factors. They also determined that these protective factors were influenced by internal qualities, family characteristics, and supports from outside the family (Masten & Tellegen). Their work began to concentrate on the environmental traits of protective factors (Cohu, 2005). As the scholarship of resilience began to grow, researchers realized that the significance of their work had the potential for informing prevention, practice, and policy—if the pathways that led away from psychopathology could be understood.

Understanding resilience. The Merriam-Webster online dictionary defines *resilience* as "an ability to recover from or adjust easily to misfortune or change." While this straightforward description captures the essence of resilience, for scholars in diverse fields (e.g., developmental psychology, sociology, medicine), the knowledge and understanding of resilience has progressed a great deal over the past several decades (Richardson, 2002). Luther and Cicchetti (2000) described resilience as a fluid and dynamic concept that is actively evolving. Most recently, resilience is being described as "the capacity of a dynamic system to withstand or recover from significant threats to its stability, viability or development" (Masten, 2011, p. 494). Although there are slight variations between each scholar's definitions of resilience, the main premise is that a hardship, obstacle, or challenge is successfully adapted to and overcome, resulting in a positive outcome.

In order to better understand resilience, researchers have also outlined some important cautions regarding what resilience is not. Reivich and Shatte (2003) argued that resilience should not be considered a dichotomous attribute that someone has or does not have. Luther and Cicchetti (2000) similarly suggested that resilience is a process or a phenomenon and that it should not be viewed as (a) a personal characteristic of an individual, (b) an adjective to describe someone, or (c) an attribute that is indelibly implanted in someone. Rutter (2012) further identified resilience as an interactive concept or process that has to be inferred, rather than being a fixed attribute of an individual.

Because resilience is not a dichotomous attribute or indelibly implanted in someone, it can come and go in varying degrees (Pargas et al., 2010) and can be strengthened/learned (Alvord & Grados, 2005; Revich, Seligman, & McBride, 2011). Perhaps Alvord and Grados (p. 244) expressed this distinction best, "resilience should be seen as an acquired, gradually

internalized, generalized set of attributes that enable a person to adapt to life's difficult circumstances. It involves action. It means taking charge of one's life." In a review of resilience research, Wilkes (2002) judged that resilience was a process that could be found working in everyone to some degree.

One of the earliest and most prominent scholars on resilience, Rutter (2012) recently described that those who have experienced a comparable level of adversity either have a weakening "sensitizing" effect or a strengthening "steeling" effect when they undergo stress or adversity. This means that those who exhibit resilience are strengthened when faced with adversity, and this helps them become more stress resistant or resilient to future hardships. He further relates "steeling" to the idea of disease inoculation, which is based on the premise that if a small dosage of disease is introduced to a host (e.g., vaccinations), then immunity to the disease will develop and protect the host from future exposures to the disease. With this line of reasoning, resilience can strengthen as adversities are successfully overcome.

While the study of resilience was unintentionally discovered, it slowly emerged and over the last two decades it has burgeoned to become a focus and gained a sense of urgency for researchers, clinicians, and policy makers (Neuman, 2009; Rutter, 2012). This has largely been influenced through the materialization of Seligman's "positive psychology" and Layard's "happiness" agenda (Rutter, 2012). Resilience research has spilled over and been influenced by many other disciplines. With the collective efforts of resilience scholars from different fields, a metatheory of resilience has emerged (Richardson, 2002).

Resilience theory. Richardson (2002) outlines resilience theory by describing three waves of resilience inquiry, which he labeled *Resilient Qualities*, *the Resilient Process*, and *Innate Resilience* respectively. The first wave focused on the common phenomenological

qualities and characteristics (known as protective factors) of those who thrive despite hardships (known as risk factors). The second wave was centered on discovering the process of attaining resilient qualities, or strengthening resilience. The third wave focused on resilience as an energy, which resulted in resilience theory.

Resilience theory postulates that resilience is the force or energy within us that drives us through adversity toward self-actualization (Richardson, 2002). In order to support resilience theory as a metatheory, Richardson illustrated how different researchers in fields (e.g., physics, philosophy, medicine, theology, psychology, biology, education) understand the concept of energy/resilience. For example, he didactically used the idea of energy as it is explained in physics and interpreted how this energy is felt on a personal experiential level. Resilience theory is considered a metatheory because the facets of resilience are more fully captured and understood through the unique perspectives of each field of study.

The mixture of the many different fields of resilience research has been noted as a "weakness" because of reported inconsistencies in measurements, constructs, and definitions within and across disciplines (Luthar et al., 2000; Vanderbilt-Adriance & Shaw, 2008.) However, despite the differences between disciplines, resilience is a widely used and accepted concept in the behavioral, social, and health sciences (Davydov, Stewart, Ritchie, & Chaudieu, 2010).

In a review of resilience in mental health, Davydov et al. (2010) advocated that resilience is best understood using a biopsychosocial model. They compared and contrasted resilience research to the multi-level study of immunity in the human body, as both are similarly influenced by a host of risk and protective factors. For example, there may be a certain gene that may either predispose or protect someone from contracting a disease, and at the same time, there may also

be environmental risk and protective factors (e.g., living conditions, nutrition, access to medicine, having another disease, proximity to someone with the disease) that may further influence their probability of contracting the disease. Although some resilience factors seem to have biological influences (Cameron, Ungar, & Liebenberg, 2007; Ellis & Boyce, 2008), many researchers believe that resilience skills can also be taught and/or strengthened (e.g., Alvord & Grados, 2005; Luther & Cicchetti, 2000; Pargas et al., 2010; Revich, Seligman, & McBride, 2011; Reivich & Shatté, 2003).

Strengthening resilience. While we are all born into this world with a defined set of chromosomes, which we have no control over, there are many other factors we can control in order to reach our potentials. Some examples, we may be able to enhance our understanding of ourselves and others, which can help us influence our relationships for the better. We can choose to be in more conducive environments throughout the day. Further, our abilities increase as we learn and practice new information, techniques, and skills. Strengthening resilience is no different. There are ways we can increase our resilience.

As early scholars began to identify the most common and most important factors among those who were considered resilient, it became possible to develop ways to enhance resilience. When Wilkes (2002) reviewed the history of resilience research he explained that resilience could increase through environmental interventions and beckoned that the number of programs and interventions that strengthen resilience needed to increase. Over the past few decades, researchers have increased their efforts to design and implement programs to help those at risk increase resilience (e.g., Alvord & Grados, 2005; Revich, Seligman, & McBride, 2011; Steinhardt & Dobler, 2008).

Alvord and Grados (2005) focused on enhancing resilience in children by using a social-skills group to strengthen six protective factors that buffer against risk factors: (a) proactive orientation, or having a realistic positive sense of self, (b) self-regulation, (c) proactive parenting (authoritative is best), (d) forming healthy connections and attachments with family and friends, (e) achievement and involvement in school and developing special talents, and (f) community involvement and support (e.g., adult role models, teams, religious and spiritual organizations). Furthermore, Steinhardt and Dobler (2008) found that a psychoeducational stress-prevention and stress-management intervention instituted among college students was effective at promoting resilience, coping strategies, and protective factors, resulting in lower scores on psychological symptoms (e.g., depression, negative affect, and perceived stress).

Revich, Seligman, and McBride (2011) and the Penn Resilience Program have tackled the largest empirically validated resilience training project to date. The course, known as the Master Resilience Trainer (MRT), is a 10-day program designed to teach resilience skills to noncommissioned officers (e.g., drill and platoon sergeants) in the U.S. Army who, after training, become certified to teach the skills to other soldiers. The first eight days of the program covers the fundamentals of resilience which focuses on (a) self-awareness, (b) self-regulation, (c) optimism, (d) mental agility, (e) identifying character strengths in self and others, and (f) building connections with others through positive and effective communication skills. On the ninth day soldiers apply the learned resilience skills directly to military life. The tenth and last day is designed to enhance the learned resilience skills through techniques from sports psychology. The hypothesis of these scholars is that "these skills will enhance soldiers' ability to handle adversity, prevent depression and anxiety, prevent PTSD, and enhance overall well-being

and performance" (p. 26). Thus, resilience training is being used to prevent internalizing disorders from occurring in a high-risk population.

Many researchers are synonymously finding that adolescence is the most opportune time to develop, promote, and strengthen resilience (Masten, Obradovic, & Burt, 2006; Masten & Tellegen, 2012; Pargas et al., 2010). Masten and Tellegen (p. 356) claimed that "this period in development may open a window of opportunity for change, as new opportunities, motivations, and executive function skills become available."

Despite the fact that researchers agree adolescence is a key time period to strengthen resilience, they have pinpointed different factors for what increases resilience. Pargas et al. (2010) found that the major predictor of what they called "late emerging resiliency" was youth self-esteem. Meanwhile, Tebes, Irish, Vasquez, and Perkins (2004) determined that the cognitive transformations that occur during adolescence may be the chief reason for the development of resilience. Other scholars have ascertained that some youth develop resilience best by observing the behavior of a resilient role model (Aguilar-Vafaie, Roshani, Hassanabadi, Masoudian, & Afruz, 2011; Southwick, Vythilingam, & Charney, 2005). Even though these researchers may not fully agree on what develops and strengthens resiliency best, of chief importance is that resilience can be strengthened and developed (Reivich & Shatté, 2002; Wilkes, 2002). There are some youth who might be considered to have low levels of resilience because they have failed to adapt or conform to societal expectations or to interventions designed to redirect their behaviors. These youth often end up in Residential Treatment Centers (RTCs) (Frensch & Cameron 2002; Trout et al., 2008).

Residential Treatment Centers (RTCs)

RTCs are one of the most restrictive settings for adolescents (Trout et al., 2008), and have been considered a last resort for high-risk youth who have been unable to adapt or adequately respond to other less restrictive interventions (Frensch & Cameron, 2002; Trout et al., 2008). If high-risk youth have been placed in RTCs because of their inability to conform or adapt successfully to societal rules and expectations, then perhaps important lessons can be learned by contrasting other high-risk "resilient" youth who have learned to conform, adapt, and thrive despite their disadvantages. With this comparison in mind, it is likely that many RTC youth lack or have little resilience skills. Perhaps, then, this population might have the potential to receive the most benefit from learning resilience skills and increasing protective factors. Thus, understanding the characteristics of RTC youth and gaining insight on effective interventions with such youth is vital.

Characteristics of adolescents in RTCs. Youth are typically referred to RTCs by children's aid societies, courts, physicians, or family (Frensch & Cameron, 2002). Most of these youth have low levels of social competencies and have a broad range of family and social-emotional risks (Trout et al., 2008). About 95% have at least one mental disorder, and a little over 90% have two or more disorders (Connor et al., 2004; CWLA, 2005; Trout et al., 2008). Further, while 40%–70% have an internalizing disorder and 50%–80% have an externalizing disorder, nearly all experience symptoms of both to varying degrees (Brady & Caraway, 2002; Connor et al., 2004; Trout et al., 2008).

In an analysis of 397 youth in RTCs, Connor et al. (2004) provided important data to help describe the nature of this generally disadvantaged population. In addition to a high prevalence of mental disorders, they found that half of these youth had been physically abused, a third had

been sexually abused, and a quarter had been physically and sexually abused. They also determined the mean IQ of these youth to be 82, which is over a full standard deviation below average. A great portion of the sample also engaged in impulsive activities: 53% reported using drugs or alcohol, 58% were classified as being aggressive, and 49% had a disruptive behavioral disorder (e.g., conduct disorder, ADHD). Not surprisingly, the family life of most of these youth was a great source of concern: 47% lived with someone outside of their family, 23% were in the custody of state and protective services, and 65% had a primary caretaker who abused alcohol.

Connor et al. (2004) also found that females in RTCs exhibited significantly higher amounts of psychopathology and behavioral problems than males. For example, the female to male prevalence of anxiety was 48% compared to 38%, depression was 47% compared to 37%, and conduct issues were 51% compared to 42%. Females were also more likely to use drugs (39%) and alcohol (38%) when compared to boys (25% and 22%). Similar differences were found when comparing the prevalence of physical and sexual abuse of girls (60% and 64%) to boys (43% and 27%), respectively. The authors' explanation for these stark differences is that authorities may not consider placing girls in RTCs until they have higher levels of psychopathology and behavioral problems than their male counterparts. The findings of girls having more psychopathology and behavioral problems than boys in RTC are similar to Hussey and Guo's (2002) characteristics of earlier adolescent youth ages 5 to 13 in RTCs.

Brady and Caraway (2002) examined the trauma associated with youth in RTCs. They discovered that over 97% had experienced a traumatic event (e.g., physical abuse, sexual abuse, witnessing domestic violence, gross neglect, termination of parental rights,), and 65% had experienced three or more. When the researchers asked each child how they felt their traumatic experiences had affected them, some hopeful information began to emerge. While 46% felt that

their traumatic experiences had negatively impacted them, 39% believed that their experiences had helped them become a stronger person. The investigators also discovered two interesting inverse relationships. First, as the number of types of trauma exposures increased, the child's reported anger decreased. This suggests that those exposed to more traumas had less anger than those exposed to fewer traumas. This may be explained by what Rutter (2012) described as a "steeling" effect, which is based on the idea that if early exposures to hardships are successfully dealt with, then the individual becomes strengthened/more resilient to future hardships/traumas. Second, they also discovered a significant negative relationship between child's satisfaction with their current discharge plan and self-reported depression, which means that the children more satisfied with their future outside of the RTC had less depression.

Adolescents in RTCs should be considered a vulnerable population with low resilience, and therefore they may have much to gain from learning resilience skills. Although empirical evidence on the outcomes of interventions in RTCs is limited (Frensch & Cameron, 2002; James, 2011; Simmel, 2012), there have been a few promising findings that seem to coincide with some of the elements that are believed to enhance resilience and decrease mental health symptoms.

Effective interventions in RTCs. In a review of treatment models for group homes and residential treatment facilities James (2011) discussed several inadequacies of the current research on interventions conducted in RTCs by explaining:

> The outcome literature on group care is scant, and current knowledge about its effect on targeted outcomes is mostly based on studies with small nonrepresentative samples, and weak study designs, lacking control groups and standardized review of treatment models for group homes and residential care (p. 309).

In other words, there have not been many studies in this area, and those that have been conducted do not meet up to the highest standards in science. James also outlined some common features among different treatment models that have shown to predict positive or negative outcomes. Some of the features that predicted positive outcomes were (a) involving families in the treatment process, (b) ensuring that after-care services are available, and (c) having a shorter length of stay. The aspects that predicted negative outcomes were having (a) a co-morbid substance use disorder, (b) a history of physical or sexual abuse, and (c) persistent conduct problems that onset early in life.

Some studies have indicated that youth with better social skills appear to receive more benefit in RTCs. Huang, Duffee, Steinke, and Larkin (2011) observed the number of services that treatment staff provided to youth in RTCs. They found that youth with higher levels of social engagement received more treatment interventions. They also discovered that the youth with positive peer relationships in group settings received more services. Students who exhibit these skills may receive more services because they are able to recognize and communicate their problems, which in turn helps clinicians to recognize the services to provide.

Youth in RTCs with stronger social support from peers, caregivers, and treatment staff also show a significant decrease in symptomatology (Brady & Caraway, 2002). Brady and Caraway further noted that if these youth were able to report having "something to look forward to," it served as a buffer to depression. One way staff promoted this hopefulness was by setting goals and helping youth become more confident and comfortable with their discharge plans. Thus, it is important for these youth to become more socially involved and aware of the control they can have over their future lives. Because youth in RTCs have experienced such a wide range of mental health problems, traumas, and hardships, it is important that staff avoid a one-

size-fits-all approach to treatment (Lyons et al., 1998). In other words, it is imperative for youth in RTCs to receive treatment through a combination of therapeutic modalities (e.g., individual therapy, group therapy, recreational therapy, school interventions, and medicinal support). Connor et al. (2004) addressed this concern best by clarifying that "treatment needs to be tailored to the needs of the child. Furthermore, specific and targeted interventions that are evidence-based and evaluated in populations of seriously emotionally disturbed youths are needed (p. 508)." Social and emotional learning (SEL) is an evidence-based intervention that has shown to be effective for youth with emotional and behavioral disorders, particularly among those with internalizing disorders. Thus SEL may be a viable treatment option for youth in RTCs.

Social and Emotional Learning

Theories and influences guiding SEL. According to Hawkins, Smith, and Catalano (in Zins, Weissberg, Wang & Walberg, 2004, p. 135–136), SEL is best understood through what they describe as a theory of social development. Their theory of social development is an amalgamation of three theories of human behavior and development: (a) Bandura's social learning theory, (b) social control theory, and (c) differential association theory. Social learning theory is based on the premise that people learn in a social context through modeling, verbal instruction, and symbolic interpretation (e.g., media or books involving a real or fictional character who demonstrates the skill or behavior; Sims & Manz, 1982). Social control theory focuses primarily on the significance of how children develop relationships and social bonds as a source of norms, beliefs, and values, which can ultimately assist them in instilling a moral code and provide a buffer against deviant acts. Differential association theory, on the other hand, is a learning theory developed by Edwin Sutherland that focuses more on how individuals learn and develop negative behaviors, attitudes, and values (e.g., conduct problems, aggression, violence,

prejudices). This theory looks specifically at the associations and relationships of people within smaller groups. Within these groups, codes are developed that establish what is considered a desired behavior for that group. Ultimately these codes could promote criminal activity or prosocial behaviors. In the case of a SEL context, the group culture would serve to promote positive relationships, conversations, and behaviors.

Another major influence on the current practice of SEL is the learner-centered principles, which were empirically derived by the Task Force on Psychology in Education set forth by American Psychological Association (APA) in the early 1990s. The task force reviewed a century of literature and research on learning and came up with 12 fundamental principles that were most influential on learners and the learning process (McCombs, as cited in Zins, Weissberg, Wang, & Walberg, 2004, p. 28–29). Since then, the APA added two more principles and categorized them into four empirically validated factors: (a) cognitive and metacognitive, (b) motivational and affective, (c) developmental and social, and (d) individual differences (APA, 1997). McCombs described learner centered as "the perspective that couples a focus on individual learners—their heredity, experiences, perspectives, backgrounds, talents, interests, capacities, and needs—with a focus on learning (p. 30)." These learner-centered factors and principles are used to enhance the teaching and learning process. Therefore, the objective of SEL is for learning to take place on an individualized or person-centered level. Although the history of SEL only spans the last few decades, the research base is extensive and quite impressive and has shown to produce meaningful gains with children and adolescents (Merrell & Gueldner, 2010).

The beginnings of SEL. The study of SEL was greatly influenced in the late 1960s by the Yale Child Study Center, child psychiatrist James Comer, and the New Haven, Connecticut,

school district. Together they created the School Development Program (SDP) and implemented it in two low-SES elementary schools in New Haven, Connecticut (Panjwani, 2011). The main premise behind the SDP was that students would benefit most by learning how to develop and prepare for life outside of the classroom (e.g., social skills, problem solving, resolving conflicts, managing emotions, and enhancing self-esteem), rather than only focusing on academic materials. According to Panjwani, prior to implementing SDP the two schools had the lowest academic achievement and school attendance in the city. Over the next decade, truancy and behavior problems declined remarkably, and by the early 1980s, they surpassed the national average in academic achievement.The efforts and successes of the SDP helped to bring the dawn of SEL.

The development of SEL. Shriver and Weissberg (1996) continued the work with the New Haven school in the late 1980s by developing a successful K–12 preventative social development program designed to promote social and emotional resilience in students. However, it was not until the 1990s when Daniel Goleman (1995) published his book *Emotional Intelligence* that SEL began to burgeon into a recognized and respected scholarship by researchers, practitioners, and policy makers.

In 1994 the term social and emotional learning, or SEL, was coined by a gathering of researchers, educators, and child advocates at a meeting hosted by the Fetzer Institute for the purpose of promoting prevention in mental health. Through their efforts the Collaborative for Academic, Social, and Emotional Learning (CASEL) was established (Greenberg et al., 2003) to advance the science- and evidence-based practice of SEL. Since then, researchers have found that youth gain significant benefits when they are exposed to SEL curriculums, strategies, and programs (e.g., Benson, 2006; Caldarella, Christensen, Kramer, & Kronmiller, 2009; Catalano,

Berglund, Ryan, Lonczak, & Hawkins, 2002; Durlak et al., 2011; Guerra & Bradshaw, 2008; Merrel, 2010; Weissberg, Kumpfer, & Seligman, 2003). The strategic work of these scholars, and many others, has greatly influenced how we understand and view SEL today.

Defining SEL. SEL has been defined in many diverse but synonymous ways; perhaps this is why Merrell and Gueldner (2010) explained, "there is no 'official' definition of SEL (p. 7)." There have been six core competencies that have been used to promote SEL: (a) recognize and manage emotions, (b) set and achieve positive goals, (c) appreciate the perspectives of others, (d) establish and maintain positive relationships, (e) make responsible decisions, and (f) handle interpersonal situations constructively (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). SEL has similarly been described as "the process through which we learn to recognize and manage emotions, care about others, make good decisions, behave ethically and responsibly, develop positive friendships, and avoid negative behaviors" (Zins, Weissberg, Wang & Walberg, 2004, p. 4). The CASEL likewise outlined comparable definitions and goals for quality SEL programs by explaining that they should foster the growth of five interrelated cognitive, affective, and behavioral competencies: self-awareness, self-management, social awareness, relationship skills, and responsible decision making (CASEL, 2007). Essentially, SEL is the process of attaining the core attributes commonly found among competent, capable, and socially healthy people. Moreover, the primary aim of SEL programs is to promote the above skills, attributes, and abilities in youth in order to help them develop frameworks for reducing risk factors and fostering resilience for positive adjustment (Durlak et al., 2011).

Empirical evidence for SEL. The base of SEL research is both wide and deep. To date, hundreds of SEL studies have been conducted in a wide variety of settings across diverse populations. There have been several large-scale meta-analyses (Durlak et al., 2011; Nelson,

Westhues, & MaCleod, 2003; Payton et al., 2008), dozens of program evaluations (e.g., Caldarella, Christensen, Kramer, & Kronmiller, 2009; Hawkins et al., 1992; Merrell, 2010; Reyes et al., 2012; Schonert-Reichl, Smith, Zaidman-Zait, & Hertzman, 2012, etc.) and scores of studies that test and investigate the different factors and facets of SEL (e.g., Ashdown & Bernard, 2012; Gresham, Sugai, & Horner, 2001; Parlakian, 2003; Polleck, 2010).

In three separate meta-analyses of SEL programs, researchers found numerous positive gains for youth exposed to these programs. Nelson et al. (2003) analyzed 34 different preschool prevention programs and found that the SEL programs showed short-, medium-, and long-term positive effects on cognitive and academic outcomes for the youth exposed to the programs. Payton et al. (2008) examined 317 studies with over 300,000 students and found that emotional distress and conduct problems decreased and that social behaviors, academic performance, social-emotional skills, and attitudes towards self, school, and others increased. Payton et al. also found that SEL programs were effective no matter which setting and population they were implemented in and with. These researchers also beckoned that SEL programs were one of the most successful development programs available to youth.

In the latest meta-analysis Durlak et al. (2011) reviewed 213 school-based SEL programs involving over 270,000 K–12 students. They found that students exposed to SEL programs had significantly better attitudes, behavior, academic performance, and general social and emotional skills when compared to students in control groups. Durlak et al. also found that when the programs met four criteria, which they described as SAFE (sequenced, active, focused, and explicit), they were effective in multiple areas, but when programs failed to meet these criteria they were not as successful. In their analysis, they also reviewed 33 studies that gathered follow-up data for at least 6 months after the SEL program and found that all of the measured outcomes

remained significant. With the massive empirical support for these programs, it is no wonder why the CASEL organization and research affiliates offered this supplication to government officials and policy makers, "given these positive findings, we recommend that federal, state, and local policies and practices encourage the broad implementation of well-designed, evidence-based SEL programs during and after school (Payton et al., 2008,).

In short, SEL programs benefit youth in multiple and lasting ways and are validated through extensive empirical research. Government officials and policy makers have begun to catch the vision of SEL, and several states have passed new legislation that promote communitywide SEL efforts, particularly the 2003 Children's Mental Health Act in Illinois and the Children's Mental Health Act in New York in 2006 and 2008 (Merrell & Gueldner, 2010).

While most SEL programs have been researched in public school settings with the general student body, some studies have reported the effects of SEL programs among those students who are higher risk. For example, youth with conduct disorders benefited greatly from programs that worked on problem solving, internal dialogue training, anger management, and cognitive restructuring (Kazdin, 1995). In Hawkins et al. (1992) Seattle social development project for the prevention of anti-social behavior in children, they found that suspensions, drug use, and aggression in boys decreased while standardized achievement scores on tests and positive attachment to self, others, and school increased. In fact, many programs have components that help students apply their SEL skills to prevent potentially harmful behaviors like substance abuse, bullying, and interpersonal violence (Zins & Elias, 2006). In a pilot study of fourth and fifth grade students at risk for internalizing disorders, students had a significant decrease in internalizing symptoms while significantly increasing their social and emotional skill knowledge when exposed to the *Strong Kids* SEL curriculum over a six-week period (Marchant,

Brown, Caldarella, & Young, 2010). The *Strong Kids* SEL series, which was designed by Dr. Kenneth Merrell and the Oregon Resiliency Project at the University of Oregon, is one particular SEL curriculum that is gaining empirical attention (Merrell, 2010).

The *Strong Kids* SEL series. The *Strong Kids* series was carefully created over a five-year period through empirical findings and feedback from field tests (Merrell & Gueldner, 2010), as well as guidelines for effective SEL interventions set forth by CASEL. The *Strong Kids* series is "designed to be a brief and easy to use program that specifically targets social and emotional competence and resiliency and gives students skills to address problems associated with internalizing symptoms" (Merrell & Gueldner, p. 40). There are five grade-specific versions of the *Strong Kids* series for students from preschool to 12th grade. The first two target Pre-K and K–2 students and is known as the *Strong Start* program. The next two target grade 3–5 and 6–8 students and is known as the *Strong Kids* program. The final program is called *Strong Teens*, which is designed for students in grades 9–12. Each of these programs has 10–12 lessons which, "focus on teaching social and emotional learning concepts, building resiliency, finding assets and building on them, setting goals, and learning general coping skills. (Merrell & Gueldner, p. 40)."

To date, the *Strong Kids* series has been evaluated in several different settings (e.g., pre-schools, elementary schools, junior high schools, high schools, special education formats, and with minority groups) and has been shown to be effective at increasing SEL knowledge and behaviors, increasing coping skills, and reducing internalizing symptoms among at risk students (e.g., Caldarella, Christensen, Kramer, & Kronmiller, 2009; Kramer, Caldarella, Young, Fischer, & Warren, 2014; Marchant, Brown, Caldarella, & Young, 2010; Merrell, 2010). It has also been well received by parents and those professionals who have taught the curriculum (Merrell, 2010). Because the *Strong Kids* series is designed to decrease internalizing symptoms and increase

social and emotional resiliency, youth in residential treatment centers (RTCs) may be a population who could receive great benefit from it.

So far, there have only been two studies of the *Strong Kids* series in RTCs. Berry-Krazmien & Torres-Fernandez (2007) evaluated the impact of *Strong Kids* (grades 4–8) during two emotional support groups in a RTC. They tracked data from 12 students and found that student SEL knowledge significantly increased but did not find meaningful differences in externalizing and internalizing symptoms. Isava (2006) evaluated the impact of *Strong Teens* in a RTC in which the curriculum was taught in a shortened five-week time frame that excluded two of the lessons. Isava found that the students in the treatment group had significant improvements in social competence, anti-social behaviors, and SEL knowledge gains when compared to the control group. However, there was not conclusive evidence for internalizing or externalizing symptom reduction. Thus, there remains a need for more evaluation in this area. This study evaluated *Strong Teens* at a RTC for adolescent girls.

METHOD

Participants and Setting

This study was conducted at a Utah RTC with high-risk adolescent girls. The girls came from many states across the U.S. and were composed of a mixed ethnic group, ages 13–17. When the study began, in March of 2013, there were 54 girls at the site with a mean age of 14.85. The ethnic distribution included 58% Caucasian, 19% Native American/Alaskan Native, 13% African American, 6% Hispanic, and 4% unknown. All of these girls had a clinically diagnosed psychiatric disorder. The prevalence of girls with at least one internalizing disorder was 81%, those with at least one externalizing disorder was 87%, and 73% experienced at least one of both. The most common internalizing disorders were depressive disorders 54%, posttraumatic stress disorder (PTSD) 52%, and anxiety disorders 21%. The most common externalizing disorders were attention deficit hyperactivity disorder (ADHD) 42%, oppositional defiant disorder (ODD) 29%, bipolar disorders 25%, and conduct disorder 12%. Of note, 31% of the girls in this study also had a learning disorder The average length of stay at the RTC was approximately six months. Girls at this RTC were commonly referred through courts, state family services, public schools, families, and other mental health services. The most common reasons for admission were problems related to personal and emotional functioning, family functioning, community and social relationships, and academic concerns.

The RTC was considered a therapeutic school where youth receive academic instruction, recreational experiential learning, individualized treatment plans, and therapeutic and medical supports. In order to monitor the progress of each student the site used a multi-disciplinary treatment team composed of teachers, therapists, team coaches, recreation therapists, psychiatrists, and nurses. The RTC was designed to foster a team environment for the students;

each team was composed of 8–16 youth who lived together. The team environment was intended to empower and assist students to manage their emotional and behavioral problems in more appropriate ways.

All staff at the site received trainings and certifications on working with emotionally disturbed youth. As of March 2013, there were 6 master's-level therapists—four with a master's in social work (MSW) and two with a master's in marriage and family therapy (MFT) who provided individual, group, and family therapy for each patient. There were 5 females and 1 male with a mean age of 33.7 and mean length of experience in the field of 8.1 years. The supervisor was a female with 5.5 years of experience working with and overseeing the youth in this RTC. Her responsibilities included shadowing different units, writing and reviewing behavioral reports, training staff members, and deescalating aggressive patients.

Research Design

In this study, a non-equivalent, quasi-experimental, wait-list control group design was used. This design was considered non-equivalent because it was not possible to randomly assign the girls to groups due to being assigned to their therapist at intake. It was also considered a quasi-experimental design because the therapist caseloads were preexisting. However, the therapists were randomly assigned to be in either the treatment or wait-list group. This wait-list control design differed from traditional treatment/control research in that the control group also received the same intervention after a period of time (Gall, Gall, & Borg, 2007). This offsetting of groups provided a direct comparison of treatment and control, allowed for all participants to receive the independent variable, and thus combined a quasi-experiment with an analysis of a group case study.

In this wait-list control study, half of the participants were in the first treatment group where they received the independent variable (*Strong Teens*) during weekly group therapy. Meanwhile, the wait-list group, composed of the other half of participants, continued their regular group therapy. Before the first lesson of *Strong Teens*, all participants in both groups completed the dependent measures. After a period of six weeks all measures were completed again by all participants. At this point, the wait-list group was introduced to *Strong Teens*. The lessons were introduced to the wait-list group at week 6 instead of week 12 in order to minimize attrition as much as possible. After six more weeks, the treatment group finished the last lesson of *Strong Teens*, and both groups completed the measures again. Finally, both groups completed the measures for the last time six weeks later after the wait-list group finished the last *Strong Teens* lesson and the treatment group had gone 6 weeks since exposure to the last *Strong Teens* lesson. Moreover, this design provided an analysis of the entire group with a six-week treatment durability comparison, as well as a treatment and control experiment; see Figure 1.

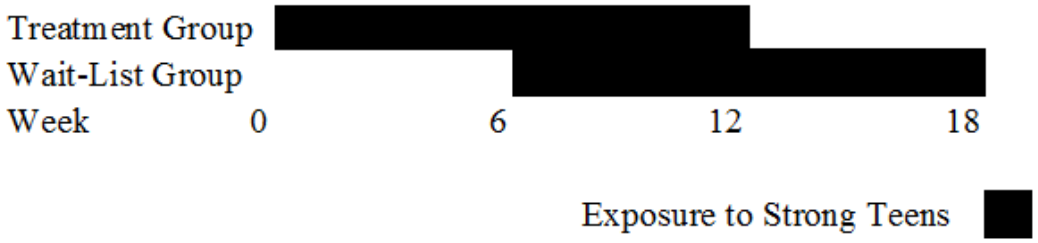

Figure 1. Study timeline.

Independent Variable

The *Strong Teens* SEL curriculum was the independent variable in this study. The *Strong Teens* curriculum is an evidenced-based program that is designed to target internalizing, behavioral, and emotional problems, and promote social and emotional resiliency in youth ages 14–18 (Merrell, 2007). While *Strong Teens* is not designed to be a complete mental health

treatment package for youth with severe mental health problems, it can be used as one component of a comprehensive or intensive intervention program. Merrell (2007) suggested that the most appropriate settings for *Strong Teens* implementation were general and special education classrooms, group counseling settings, and youth treatment facilities that have an educational component. This study met Merrell's suggestions twofold because *Strong Teens* was implemented in a RTC with a strong educational component through the means of group therapy. The lead researcher provided a 90 minute introduction, training, and question and answer session for group therapists one week before the study started.

Strong Teens was designed to be simple to implement with time feasibility as a high priority. The duration of the curriculum is 12-weeks and the average length of each lesson is suggested to be 45–50 minutes. The *Strong Teens* curriculum is highly structured and partially scripted with very specific objectives and goals for each lesson. Lessons and implementation guidelines were built on empirical evidence and research findings from the fields of education and psychology (Merrell, 2007). Each of the lessons followed a similar format and provided flexibility for group leaders to either follow the script and examples directly or to modify the lessons to utilize creativity as needed. The curriculum was specifically planned and programmed for optimal maintenance and generalization by following the best practices guidelines from the literature. For example, each lesson aims to generalize the new skills learned across settings other than the intervention setting (e.g., home and community).

There are 12 lessons in the *Strong Teens* curriculum. The 12 lessons are titled as follows: (a) About *Strong Teens*: Emotional Strength Training, both (b) and (c) Understanding Your Emotions, (d) Dealing with Anger, (e) Understanding Other People's Emotions, both (f) and (g) Clear Thinking, (h) The Power of Positive Thinking, (i) Solving People Problems, (j) Letting Go

of Stress, (k) Behavior Change: Setting Goals and Staying Active, and (l) Finishing Up! There is also a supplemental booster lesson, which is designed to help students who have gone through the curriculum to maintain the skills they have acquired and to strengthen the positive changes they may have made. However, the booster lesson was not implemented in this study. The lessons also typically include handouts and short homework assignments. Overall, the *Strong Teens* curriculum was developed to be an effective and user-friendly program that was designed to prevent/reduce internalizing symptoms and increase social and emotional resilience.

Dependent Variables and Measures

The dependent variables in this study were student SEL knowledge, internalizing symptoms, and social and emotional resilience. In unison with the measurement of these positive and negative factors, Suldo and Shaffer (2008) stressed the importance of using a dual analysis of mental health/wellbeing by measuring positive indicators (e.g., resilience, well-being, strengths) alongside of negative indicators (e.g., risk factors, disorder symptoms, distress). These researchers proposed that this dual-factor of mental health helps to capture a clearer and more comprehensive assessment of mental health when studying youth.

In this study, student SEL knowledge was measured by the *Strong Teens* knowledge test (Merrell, 2007), which is a part of the *Strong Teens* curriculum. Student internalizing symptoms were measured by the Social Skills Improvement System student and teacher forms (SSIS-S & SSIS-T; Gresham & Elliot, 2008) internalizing subscale. Student resilience was measured by the Social Emotional Assets and Resilience Scale adolescent and teacher forms (SEARS-A & SEARS-T; Merrell, 2011). A treatment fidelity checklist was completed by the lead researcher, or a trained research assistant, approximately once every three lessons. These checklists were designed to evaluate the integrity of the *Strong Teens* lessons as they were being implemented.

Finally, a social validity measure was administered to therapists at the conclusion of the study, which asked for their perceptions of *Strong Teens* as a viable and supportive asset for adolescents in RTCs. Each of these measures are described below.

***Strong Teens* SEL Knowledge Test.** The *Strong Teens* Knowledge Test consists of a pretest and a posttest, which is used to determine how well the curriculum worked to improve student SEL knowledge. The knowledge test consists of 20 questions (6 true/false and 14 multiple choice) which contain at least 3 items that are directly linked to each lesson concept. According to Isava (2006), "previous studies have shown it to be sensitive to treatment gains, and internal consistency reliability with small samples has ranged from .60 to .69 (p. 48)."

Social Skills Improvement System (SSIS) Internalizing Subscale. The SSIS internalizing subscale is composed of 10-items (see Appendices A & B). All items are based on a four-point Likert scale that asks the student (or teacher) to respond to how true a statement is of the student (*not true*, *little true*, *a lot true*, or *very true*). The items measured various symptoms of internalizing disorders from the student (e.g., "I feel lonely," "I feel nervous with my classmates," "I'm afraid of a lot of things," "I often feel sick") or perceptions of the student via the teacher (e.g., "withdraws from others," "gets embarrassed easily," "has low energy or is lethargic," "says bad things about self"). According to Gresham and Elliot (2008) norms for the SSIS were matched by sex according to the March 2006 U.S. population estimates for race/ethnicity, SES, and geographic region. Norms for the student form were derived from 800 students (300 ages 13–18), and norms for the teacher form came from 950 teachers (200 for students ages 13–18). The content for the internalizing items were based on diagnostic features and criteria specified in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR; APA, 2000). The internal consistency reliability for the student form (ages 13–18) on the

internalizing subscale had an alpha coefficient of .88 (.90 for teachers). The test-retest reliability for the student form (ages 8–18) had an alpha coefficient of .67 (.82 for teachers). In terms of internal validity the internalizing subscale on the student form had a .88 correlation with problem behaviors (.76 for teachers). The convergent validity of the SSIS student internalizing subscale was demonstrated by a .76 correlation with the Behavior Assessment System for Children, Second Edition (BASC-2) student internalizing problems composite (.62 for teachers).

Social Emotional Assets and Resilience Scale (SEARS). The SEARS is a cross-informant system for assessing the social and emotional competency and resilience of children ages 5–18. It is a strength-based assessment which is designed to measure child and adolescent strengths from the unique perspective of the informant (Merrell, 2011). The SEARS-A (adolescent) and SEARS-T (teacher) short forms (ages 13–18) are 12-item measures that assess adolescent social emotional assets and resilience from the adolescent and teacher/group leader perspectives, using the four-point Likert scale (*never*, *sometimes*, *often*, and *always*; see Appendices A & B). The student is given a statement and asked to rate how well it describes them (e.g., "I make friends easily," "I am a responsible person," "I stay in control when I get angry"), and the teacher similarly rates their perceptions of the student (e.g., "makes friends easily," "is dependable," "knows how to identify and change negative thoughts").

According to Merrell (2011) norms for the SEARS-A included 1,727 adolescents (ages 13–18) from across the U.S. with an ethnic distribution of approximately 55% Caucasian, 18% African American, 15% Hispanic, and 12% other. Norms for the SEARS-T included 1,400 teachers from across the U.S. with an ethnic distribution of approximately 58% Caucasian, 20% African American, 14% Hispanic, and 8% other. The internal consistency reliability of the SEARS-A short form was .82 (.93 for teachers). The test-retest reliability for students was .84 at

two-weeks, .81 at four-weeks, and .80 at six-weeks (.90 at two-weeks for teachers). The SEARS-A short form had a .94 correlation with the SEARS-A (.98 for SEARS-T short form with SEARS-T). The convergent validity of the SEARS-A short form when compared to the Social Skills Rating System was .64 (.79 with the teacher short form).

Treatment fidelity and social validity. Treatment fidelity was measured using a checklist that the lead researcher, or a trained research assistant, completed during the observation of approximately every third lesson. The checklist was intended to track the components of the specific lesson being taught (see Appendix C) and was adapted from previous *Strong Kids* series studies (Kramer et al., 2014; Kramer, Caldarella, Christensen, & Shatzer, 2010). Although the lead researcher and research assistant, did not participate in the lessons, and remained as covert as possible, group leaders were encouraged to ask for feedback before or after lessons.

Social validity was measured by a 27-item survey that assessed the degree to which the group leader perceived the usefulness and effectiveness of the *Strong Teens* curriculum as it related to adolescents with internalizing disorders in RTCs (see Appendix D). The questions were developed following the guidelines for social validity proposed by Wolf (1978) and have been adapted from a previous *Strong Kids* series study (Kramer et al., 2014). The survey asked group leaders to rate the acceptability of the goals, procedures, and outcomes of *Strong Teens* on a five-point Likert scale (*strongly disagree*, *disagree*, *neutral*, *agree*, and *strongly agree*). For example, questions targeted how they perceived students received the curriculum, how they perceived teaching the curriculum, and whether they plan on using it again in the future. The survey also included four open-ended questions: (a) What problems, if any, did you have with the implementation of the curriculum? (b) Would you change the way the lessons are taught? (c)

What changes, if any, would you make to the curriculum content? (d) What changes, if any, did you observe in your students?

Procedures

Before the implementation of *Strong Teens* the lead researcher procured an updated descriptors of those participating in the study (adolescent girls, group therapists, and supervisor). At this time, the adolescent girls completed the following measures: (a) the *Strong Teens* SEL knowledge test, (b) the SSIS student form, and (c) the SEARS-A. At the same time, the group therapists and the supervisor (who was blind to the study) completed companion SSIS and SEARS forms, rating their perspectives of the girls. The therapists, along with the girls assigned to their caseloads, were randomly assigned to be in either the treatment or wait-list group.

Within the week after the first measurement period, roughly half of the adolescent girls, along with their respective group therapists, began the *Strong Teens* curriculum as the focus of weekly group therapy (treatment group). Meanwhile, the remaining adolescent girls, along with their respective therapists, continued regular group therapy (wait-list group). Group therapy at this site was generally psychoeducational in nature, with an emphasis on mood disorders, coping skill development, and addictive behaviors. After six weeks/six lessons, the participants completed these measures again for the second time. At this point, the treatment group continued on with the remaining six lessons, and the wait-list group began the first *Strong Teens* lesson. At week 12, the third administration of measures was given. At this occasion, the treatment group had finished the 12th and final lesson of *Strong* Teens and the wait-list group the 6th lesson. At this juncture, the treatment group started regular group therapy again while the wait-list group continued on with lessons 7–12. At week 18, the fourth and final administration of measures took place.

While the *Strong Teens* SEL curriculum was implemented, a treatment fidelity checklist (see Appendix D) was completed approximately every third lesson. Throughout the 12 weeks of the *Strong Teens* instruction, therapists were able to have consultation with the lead researcher where they could ask for feedback on their perceived level of treatment fidelity, which has been shown to produce better outcomes for participants (Gueldner, 2007).

After the conclusion of the last lesson of the *Strong Teens* curriculum, the therapists completed a social validity questionnaire (see Appendix E), which asked for their perceptions of *Strong Teens* as a viable and supportive asset for adolescents with internalizing disorders in RTCs. After all of the therapist questionnaires were evaluated and all of the data from the student pre and posttest measures were statistically analyzed, the administration at the RTC was given a report of the findings from the study.

Data Analysis

The data from the pretest and posttest measures was analyzed and compared through *t*-test and chi-square statistical techniques. It was decided that parametric statistics would be used, despite a smaller sample size than anticipated. This was determined because the data revealed a normal distribution of scores with no major outliers, and the numbers of participants in each group were adequate enough to maintain statistical power (Coolidge, 2006). *T*-test and chi-square analyses were used to examine any preexisting differences between the treatment and wait-list groups (e.g., age, ethnicity, diagnoses). A split-plot repeated measures ANOVA was used to compare the within and between differences of the treatment and wait-list group over time (see Appendix H for full table). The groups were also independently evaluated by comparing scores at the different measurement periods using paired samples *t*-tests. This allows for both a group comparison (between differences) and group profile (within differences). Of

note, the second measurement period (week six) is of particular interest because the treatment group had received half of the lessons while the wait-list group served as the control group. Due to the smaller sample size, effect sizes were also calculated to capture the magnitude of differences using Cohen's *d*.

The social validity questionnaires were evaluated through the use of descriptive statistics. The responses were collectively assessed based upon question type, level of agreeability, procedures, and outcomes. Further, responses from group leader open-ended questions were examined qualitatively for common patterns, constructs, and any themes that emerged using an interpretational analysis, which involves segmenting the database, developing categories, coding segments, grouping category segments, and drawing conclusions (Gall, Gall, & Borg, 2007).

RESULTS

Attrition

At the beginning of the study, there were six therapists (three in the treatment and three in the wait-list group), 28 girls in the treatment group, and 26 girls in the wait-list group. One therapist who was part of the treatment group moved to a different site two weeks into the study and as a result was excluded from further participation. The eight girls on this therapist's caseload were temporarily transitioned to other therapists until a new therapist was hired. It took approximately five weeks before the new therapist arrived. It was decided that the new therapist, and the eight girls, would be dropped from the study due to inconsistency of care. Because of the fluctuating nature of the RTC population there were also 10 girls who were discharged or transferred care over the course of the 12 lessons (1 from the treatment group and 9 from the wait-list group). This resulted in a total attrition rate of approximately 33.3%. Data from the treatment center indicated that this attrition rate was normal and consistent with other 12-week periods within the last 2 years. After attrition effects were accounted for, there were a total of 19 girls in the treatment group and 17 girls in the wait-list group who received all 12 *Strong Teens* lessons. During the last six weeks there were 4 girls from the treatment group and 3 from the wait-list group who discharged the program and were therefore unable to complete the final measures. Moreover, their data were not included in the repeated measures ANOVA.

Pre-intervention Differences

A chi-square analysis was employed to examine any preexisting differences between the treatment and wait-list groups in terms of ethnicity ($\chi^2 = 1.57$, $p = .81$), home state ($\chi^2 = 4.92$, $p = .77$), and disorder type ($\chi^2 = 2.07$, $p = .36$) with no significant differences found. Independent samples *t*-tests were also performed to determine if there were any pre-test differences between

the treatment and wait-list groups' initial scores on the *Strong Teens* SEL Knowledge Test. No significant differences were found ($t = .06$, $p = .82$). Because the SSIS and SEARS measures were completed by the adolescent girls, their respective group therapists, and a supervisor who was blind to the study, the results from each rater were compared, respectfully. No significant differences were found between the groups on these measures (see Table 1) suggesting that the treatment and wait-list groups were adequately similar before the *Strong Teens* intervention.

Table 1

Pre-intervention Group Comparisons

	Treatment Group (n=19)		Wait-List Group (n=17)			
Measure	*M*	*SD*	*M*	*SD*	*t*	*p*
Age	15.42	0.90	15.00	1.17	1.48	0.23
SSIS						
Girls	12.74	3.57	10.87	5.24	1.53	0.23
Therapist	17.17	3.28	17.29	3.99	0.01	0.93
Supervisor	16.05	3.82	16.40	4.07	0.07	0.80
SEARS						
Girls	19.74	4.11	18.40	4.52	0.81	0.37
Therapist	9.50	4.94	11.07	3.34	1.04	0.32
Supervisor	15.68	5.79	14.60	4.52	0.35	0.56

Impact on Study Variables

Effect on social and emotional knowledge. The first research question addressed whether the implementation of *Strong Teens* would have an effect on the girls'social and emotional knowledge, as measured by the *Strong Teens* social and emotional knowledge test. There was a not a statistically significant difference ($F = .26$, $p = .61$, $d = .18$) between the treatment and wait-list group at week six (see Table 2) after the treatment group had received half of the lessons and the wait-list group had not yet been exposed to the curriculum. In

addition, although both groups marginally increased in social and emotional knowledge, the analysis revealed that there were no significant differences within the treatment (t = -.80, p = .43, d = .15) or wait-list groups (t = -1.32, p = .21, d = .38) over the 12-week intervention (see Appendix G).

Table 2

Between Group Differences at Week Six for All Variables

			Week 0		Week 6				
Variable	Rater	Group	*M*	*SD*	*M*	*SD*	*F*	*p*	*d*
Social and Emotional Knowledge	Girls	Treatment	12.11	2.90	11.28	2.87	0.26	0.61	0.18
		Wait-list	11.87	3.00	12.24	2.20			
Internalizing Symptoms	Girls	Treatment	12.74	3.57	12.05	4.21	0.43	0.52	0.23[c]
		Wait-list	10.87	5.24	11.59	5.79			
	Therapists	Treatment	17.17	3.28	15.21	4.89	2.51	0.12	0.54[b]
		Wait-list	17.29	3.99	17.82	4.99			
	Supervisor	Treatment	16.05	3.82	14.53	2.86	4.39	<.05*	0.72[b]
		Wait-list	16.40	4.07	16.75	3.49			
Resilience	Girls	Treatment	19.74	4.11	20.74	6.05	1.84	0.18	0.47[c]
		Wait-list	18.40	4.52	18.00	3.50			
	Therapists	Treatment	9.50	4.94	14.16	4.88	26.89	<.001**	1.78[a]
		Wait-list	11.07	3.34	8.41	3.91			
	Supervisor	Treatment	15.68	5.79	15.47	4.50	2.21	0.15	0.51[b]
		Wait-list	14.60	4.52	12.50	2.61			

p: * = <.05, *** = <.001; Effect size: a = large, b = medium, c = small

Effect on internalizing symptoms. The second research question addressed whether the implementation of *Strong Teens* had an effect on the girl's internalizing symptoms, as measured by the SSIS student form. Though there was a small effect size from the girl's perspective, there was not a statistically significant difference between groups at week 6 (F = .43, p = .52; d = .23 see Table 2). For those girls in the treatment group, there was a significant difference in self-reported internalizing symptoms from week 0 to week 12 (t = 3.29, p<.01, d = .89; see Table 3).

This indicates that the girls in the first treatment group reported a significant reduction in internalizing symptoms over the course of the 12-week *Strong Teens* intervention. However, for those in the wait-list group there was only a marginal reduction in internalizing symptoms over the 12-week intervention, though not statistically significant (see Table 3).

Table 3

Internalizing Symptom Changes Over 12 Strong Teens Lessons: All Perspectives

		Lesson 1		Lesson 12				
	Group	*M*	*SD*	*M*	*SD*	*t*	*p*	*d*
Girls	Treatment (*n*=19)	12.74	3.57	9.47	3.81	3.29	<.01**	.89[a]
	Wait-list (*n*=17)	11.59	5.79	11.35	5.85	.53	.60	.04
Therapists	Treatment (*n*=19)	17.17	3.28	15.67	4.42	1.46	.16	.39[c]
	Wait-list (*n*=17)	17.82	3.99	16.47	3.48	1.55	.14	.36[c]
Supervisor	Treatment (*n*=19)	16.47	4.16	14.47	3.09	3.24	<.01**	.55[b]
	Wait-list (*n*=17)	16.75	3.49	15.18	2.98	1.95	.07	.48[c]

p: ** = <.01; Effect size: a = large, b = medium, c = small

From the perspective of the group therapists (as measured by the SSIS teacher form) there was not a statistically significant difference between the treatment and waitlist groups (F = 2.51, p = .12) on internalizing symptoms at week 6 (see Table 2) though there was a medium effect size (d = .54) also suggesting that the treatment group experienced greater symptom reduction. Within the treatment group, there was a reduction of internalizing symptoms over the course of the 12-week intervention, with a small effect size of d = .39, approaching statistical significance (t = 1.46, p = .16). Those within the wait-list condition also showed a reduction in internalizing symptoms over the course of the 12-week intervention, with a small effect size of d = .36, approaching statistical significance (t = 1.55 p = .14; see Table 3).

From the perspective of the supervisor (as measured by the SSIS teacher form) there was a significant difference in internalizing symptoms between the groups at week 6 ($F = 4.39$, $p<.05$, $d = .72$; see Table 2), with the treatment group having significantly fewer symptoms. This indicates that those who were exposed to the *Strong Teens* curriculum during group therapy experienced a significant reduction in internalizing symptoms, when compared to those who continued regular group therapy. Further, there was a statistically significant decrease in internalizing symptoms over the course of the 12-week intervention for those in the treatment group ($t = 3.24$, $p< .01$, $d = .55$), and there was a small effect size for those in the wait-list group ($d = .48$), approaching statistical significance ($t = 1.87$, $p = .08$; see Table 3). Those in the treatment group also maintained a reduction of internalizing symptoms at the 6-week follow-up period ($t = 4.27$, $p< .001$, $d = .60$).

Effect on resilience. The third research question examined whether the implementation of *Strong Teens* had an effect on the girls' resilience (as measured by the SEARS-A). From the girls' perspective there was not a statistically significant difference between groups in resilience at week six ($F = 1.84$, $p =.18$; see Table 2), though it approached statistical significance and there was a moderate effect size ($d = .47$) indicating that the girls in treatment group had higher scores than those in the wait-list group. Interestingly, the girls in regular group therapy experienced a decrease in resilience while those exposed to *Strong Teens* significantly increased. There was also an increase in resilience over the course of the 12-week intervention for both groups. This was statistically significant for the waitlist group ($t = -3.63$, $p< .01$, $d =.87$), and there was a small effect size for the treatment group ($d = .26$), approaching statistical significance ($t = -1.48$, $p =.16$; see Table 4).

From the group therapist's perspectives (as measured by the SEARS-T), there was a statistically significant difference in resilience between the treatment and wait-list groups at week six ($F = 26.89$, $p < .001$; see Table 2), with a large effect size ($d = 1.78$), indicating that the girls in the treatment group showed higher levels of resilience than those in the wait-list group. There was also a statistically significant increase in resilience over the course of the 12-week intervention for both the treatment ($t = -3.98$, $p < .001$, $d = .84$) and wait-list groups ($t = -4.91$, $p < .001$, $d = 1.01$; see Table 4).

Table 4

Resilience Changes Over 12 Strong Teens Lessons: All Perspectives

		Lesson 1		Lesson 12				
	Group	*M*	*SD*	*M*	*SD*	*t*	*p*	*d*
Girls	Treatment (*n*=19)	19.74	4.11	21.05	5.85	-1.48	.16	.26
	Wait-list (*n*=17)	18.00	3.50	21.47	4.39	-3.63	<.01**	.87[a]
Therapists	Treatment (*n*=19)	9.50	4.94	13.89	5.50	-3.98	<.001***	.84[a]
	Wait-list (*n*=17)	8.41	3.91	12.76	4.67	-4.91	<.001***	1.01[a]
Supervisor	Treatment (*n*=19)	15.68	5.79	18.47	5.29	-2.68	<.01**	.46[c]
	Wait-list (*n*=17)	12.50	2.61	16.00	3.89	-3.96	<.001**	1.06[a]

p: *** = <.001, ** = <.01; Effect size: a = large, c = small

From the perspective of the supervisor (as measured by the SEARS-T), there was a not a statistically significant difference in resilience between the treatment and wait-list groups at week six ($F = 2.21$, $p = .15$; see Table 2), though it approached statistical significance with a medium effect size ($d = .51$). Girls in the treatment group had higher resilience scores compared to those in the wait-list group. Over the course of the full 12-week intervention both the treatment ($t = -2.68$, $p < .01$, $d = .46$) and wait-list groups ($t = -3.96$, $p < .001$, $d = 1.06$) showed a statistically significant increase in resilience (see Table 4).

Treatment fidelity findings. The fourth research question examined whether the curriculum was implemented with integrity. The group therapists were given an overview of the *Strong Teens* curriculum before the onset of the study but were not given instructions on how to implement the curriculum. This procedure was decided upon beforehand in order for the curriculum to be implemented as it most likely would be in a natural setting. In order to track treatment fidelity the primary researcher, or a trained research assistant, observed 19 of the 60 lessons (31.67%) and completed a treatment fidelity checklist.

Of the lessons observed, the mean length of time for each lesson was 30.11 minutes with a mean of 61.95% of the lesson components implemented. These results were somewhat concerning because Merrell (2007) suggested that the lessons were designed to be 45–50 minutes in length, and previous *Strong Kids* studies have shown 10–20% higher integrity rates (Kramer et al., 2014). It appeared that the primary reasons for shorter lesson time were starting lessons late, behavioral disruptions, and/or interferences by other activities at the RTC. In a review of the lesson observations the most consistent areas omitted, or only partially covered, were (a) reviewing material covered in the previous lesson, (b) activities, and (c) providing homework. Additionally, during the lessons, the therapists gave the adolescent girls an average of 10.22 (*SD* = 5.67) praise statements, 6.33 (*SD* = 8.06) reprimands, 25.56 (*SD* = 11.48) opportunities to respond, and there were 34.11 (*SD* = 14.92) student responses.

Social validity findings. The fifth research question addressed whether group therapists viewed *Strong Teens* as being socially valid (as measured by the social validity questionnaire). All five of the group therapists completed the questionnaire. In the areas of curriculum goals and procedures the mean ratings were 4.47 and 4.13, respectively, indicating agreeability/high

agreeability. In the area of curriculum outcome the average rating was 3.15 suggesting more of a neutral acceptability (see Table 5).

Table 5

Results of Responses on Social Validity Questionnaire

Questions	*M*	*SD*	Agreeability
Goals	4.47	0.30	Agree
1. Students' social and emotional concerns are great enough to warrant use of a curriculum such as *Strong Teens*.	4.00	0.60	Agree
2. A student's level of social and emotional competence is important to their academic success.	4.60	0.49	Strongly Agree
3. It is important that social and emotional knowledge and skills be taught in a school setting.	4.20	0.70	Agree
4. It is feasible for a regular education teacher to teach social and emotional knowledge and skills.	4.40	0.80	Agree
5. I feel that I have the necessary skills/training to help students with social and emotional difficulties.	4.80	0.40	Strongly Agree
6. I am confident in my ability to implement *Strong Teens.*	4.80	0.40	Strongly Agree
Procedures	4.13	0.32	Agree
7. I was able to reinforce the skills taught in the *Strong Teens* lessons during other classroom activities.	4.40	0.50	Agree
8. The time taken to deliver the weekly lessons was acceptable.	4.40	0.50	Agree
9. The length of lessons was appropriate for high school students.	4.00	0.60	Agree
10. The materials provided (manual, pictures, handouts) were sufficient to teach the curriculum.	4.20	0.40	Agree
11. The materials needed for *Strong Teens* were easy to access.	4.40	0.50	Agree
12. I felt that the curriculum manual alone provided sufficient training to teach the lessons.	4.20	0.40	Agree
13. The preparation time required to teach the lessons was acceptable.	4.00	0.00	Agree
14. Students demonstrated a transfer of knowledge and skills from the lessons to other school situations.	3.40	0.50	Neutral
Outcomes	3.15	0.52	Neutral/Agree
15. I was satisfied with the social and emotional knowledge and skills demonstrated by my students during the course of the curriculum.	2.60	0.80	Disagree/Neutral

16. The teaching procedure of the program was consistent with my regular teaching procedures.	3.20	0.70	Neutral
17. *Strong Teens* was a good way to help prevent students' social and emotional problems.	3.00	0.90	Neutral
18. I feel my students learned important skills from *Strong Teens*.	3.40	0.80	Neutral
19. I feel my students use the skills learned from *Strong Teens*.	3.20	0.70	Neutral
20. My students liked *Strong Teens*.	2.60	1.20	Disagree/Neutral
21. It was reasonable for me to teach the curriculum as it was designed.	3.20	1.00	Neutral
22. I found that *Strong Teens* was easy to teach.	4.20	0.40	Agree
23. Students were interested in or excited for the lessons and showed active participation in them.	2.20	0.70	Disagree/Neutral
24. Most teachers would find *Strong Teens* suitable for improving social and emotional competence.	4.00	0.00	Agree
25. I would recommend the use of *Strong Teens* to other teachers.	3.40	0.80	Neutral
26. I would like to implement *Strong Teens* again.	3.00	1.10	Neutral
27. I enjoyed teaching *Strong Teens*.	3.00	0.60	Neutral

In a qualitative review of the four open-ended questions some common patterns and themes emerged. The therapists unanimously reported that they felt the curriculum may have been too basic for adolescent girls in residential treatment. For example, one therapist suggested, "the curriculum itself was easy to implement. It was very straightforward and self-explanatory. However, it was too basic for girls with a lot of treatment experience." Similarly, another therapist reported, "the teens I worked with were already well-versed in the concepts that were taught in *Strong Teens*. The *Strong Teens* workbook seemed more appropriate for a younger population."

Suggestions that emerged regarding areas that the therapists would like to alter for their population was to have more experiential/interactive activities and have the lessons go into more detail in each area. For example, one therapist indicated "for this level of care I would have

lessons go into more detail and get more specific" and another therapist remarked that "having more experiential activities and not as much reading from the book or doing role plays would have been helpful."

In a review of the changes the therapists observed in their students, four of five therapists indicated that their girls were better at recognizing emotions and how they were linked to their actions. Two of the therapists also reported that the lessons helped their students improve in the areas of empathy and peer relations. To illustrate, a therapist shared that "several students really learned what empathy meant. They also became more aware of their thoughts and emotions and how they linked to their behaviors." Only one of the five therapists did not report observing any changes in their students; this therapist responded "they did not change really. They did not appear to internalize the concepts and skills that were taught."

DISCUSSION

This study evaluated the effectiveness of the *Strong Teens* SEL curriculum implemented with adolescent girls in a RTC during group therapy. The effects of the *Strong Teens* SEL curriculum has had limited exposure with RTC populations (Berry-Krazmien & Torres-Fernandez, 2007; Isava, 2006), and this is the first study, to date, that has specifically examined adolescent girls. This study also assessed whether group therapists were able to implement *Strong Teens* with fidelity and if therapists perceived the curriculum as being socially valid. Results will be discussed as they pertain to each of the research questions.

Social and Emotional Knowledge

Exposure to the curriculum only slightly increased the girls' social and emotional knowledge. These results may confirm the therapist's perceptions that the curriculum was "too basic" for the girls and that they were already "well-versed" in the SEL concepts covered. However, the results showed that a ceiling effect was not observed. In fact, before exposure to the curriculum the girls averaged 60.35% and after exposure they averaged 64.8%. This may indicate that the girls were not as "well versed" in SEL concepts as therapists perceived they were. Trout et al. (2008) reported that children and adolescents in RTCs typically have lower levels of social competencies and they have a broad range of social-emotional risks.

Further, it has also been shown that youth in RTCs average more than one standard deviation below the mean on intelligence assessments (Connor, 2004). Perhaps it is not surprising that data from the site revealed that nearly one-third of the girls' had a learning disorder. It may be that these girls have been more exposed to SEL concepts and skills than traditional students, but it may take more time and effort for these to be fully learned and applied consistently. Another consideration for the lack of knowledge gains may be explained by the

lower than expected treatment fidelity rates and shorter than suggested lesson times. Despite the lack of knowledge gains, internalizing symptom reduction and resilience increases were observed with exposure to *Strong Teens*. Perhaps knowledge acquisition may not be essential for symptom improvement.

Internalizing Symptoms

Overall, it was found that exposure to the curriculum resulted in a decrease in internalizing symptoms over the 12-week intervention. This decrease in symptoms was statistically significant from the perspective of the supervisor for both groups. The decrease in symptoms was similarly observed by the group therapists for both conditions, observing moderate reductions, which approached statistical significance. There was also a statistically significant reduction in internalizing symptoms from the perspective of the girls in the treatment group. The girls in the wait-list group, however, reported only marginal symptom reductions.

When considering that the internalizing symptoms and disorders of these girls have most likely persisted over the course of years, the therapeutic gains observed in just 12 weeks were promising. Colman et al. (2007) pointed out that intervening with adolescents between the ages of 13 and 15 is crucial for altering the persistence of mental illness into adulthood. The majority of the girls in this sample were 14 to 15 years old. With the overall reductions in internalizing symptoms, it is possible that the long-term mental health trajectories of the girls in this sample may have been improved, though examining this was beyond the scope of the current study. However, it was quite encouraging to also observe, from the perspective of the supervisor, that the girls in the treatment group maintained a significant reduction in internalizing symptoms six weeks after exposure to the curriculum, which was similar to the results of *Strong Kids* implemented with elementary students with internalizing symptoms (Marchant et al., 2010).

A primary focus of the *Strong Teens* curriculum is on identifying and communicating emotions in interpersonally constructive ways. It may be that the lessons helped the girls move closer toward, or achieve, some of the socio-developmental competencies that have been shown to be lacking among adolescents with internalizing disorders (Oland & Shaw, 2005). Further, Ghandour et al. (2010) identified that internalizing disorders may persist because many youth have not learned how to communicate their internal feelings in constructive ways. Moreover, if exposure to the *Strong Teens* lessons enhanced social and emotional communication abilities, it is likely that this would have perpetuated into helping the girls have better peer and staff relationships, deeper individual and family therapy sessions, and ultimately more self-awareness and emotional well-being, though not all of these variables were measured in the current study.

Resilience

The girls significantly improved in resilience from all perspectives (self, therapists, and supervisor). This triangulation of data strengthens the case that *Strong Teens* is a viable intervention to improve resilience in adolescent girls with emotional and behavioral disorders. Interestingly, those who continued regular group therapy for the first six weeks of the study decreased in resilience while those exposed to *Strong Teens* significantly improved in resilience. Of note, the last six lessons of the curriculum (thinking clearly, the power of positive thinking, solving people problems, letting go of stress, and setting goals) seemed to have the greatest effect on resilience. These results suggest that the first six lessons of *Strong Teens* seemed to serve as a buffer to resilience, and that the last six lessons of *Strong Teens* greatly improved resilience. The results support the notion that resilience is a phenomenon that can be strengthened and/or learned (Reivich & Shatté, 2002). It also endorses the idea that adolescence

is a favorable period to develop and strengthen resilience (Masten et al., 2006; Masten & Tellegen, 2012; Pargas et al., 2010).

This evidence is particularly hopeful when considering that youth in RTCs have greatly failed to adapt in healthy ways and/or be resilient in their preceding environments (Frensch & Cameron 2002; Trout et al., 2008). Thus, the observed strengthening of resilience among the girls in this study over 12 weeks is quite promising. Many researchers have pointed out that having an increase in resilience could promote a greater responsiveness to interventions (Masten, 2011), self-esteem (Pargas et al., 2010), and cognitive transformations (Tebes, Irish, Vasquez, & Perkins, 2004) which would ultimately lead to greater well-being.

Treatment Fidelity and Social Validity

Although the therapists did not implement the curriculum as fully as what has been shown in previous *Strong Kids* studies (Caldarella et al., 2009; Gueldner, 2007; Kramer et al., 2014), this was the first known study in which treatment fidelity was recorded with the *Strong Teens* curriculum in a RTC. Overall, the general sense from therapists was that the curriculum was easy to implement and that some behavioral improvements were observed with exposure to *Strong Teens*. It is probable to surmise that there may have been more improvements if the therapists would have followed the suggested lesson time and implemented the curriculum more fully.

The therapists almost unanimously reported that the curriculum was "too basic" for their population. These findings may not be surprising when considering that adolescents in RTCs have typically gone through several less restrictive interventions before entering the treatment of last resort (Connor, 2004; Frensch & Cameron, 2002). The therapists seemed to agree with the procedures and goals of the curriculum but were closer to neutral regarding the outcomes of the

curriculum. Additionally, the therapists also requested more experiential components and lesson details, and yet they covered the curriculum with lower fidelity than what has been shown in previous research.

Limitations and Recommendations for Future Research

One limitation for this study was that it was not possible to randomly assign or select girls into either the treatment or wait-list group. Instead, therapists were randomly assigned to groups and their preexisting caseloads followed. Moreover, this was a non-equivalent, wait-list control group design. Though difficult to do in natural settings, a true-experimental design with random assignment and random selection would be beneficial. One potential way to achieve this in future RTC studies would be to have an outside group leader implement the curriculum with a randomly assigned treatment group while a control group engaged in a neutral activity. This way participants in both groups would be able to continue regular treatment (e.g., individual therapy, group therapy, family therapy), which would help to account for extraneous therapeutic factors.

Additionally, if an outside therapist implemented the curriculum it would also allow the students' assigned therapist to provide blind-ratings. This would help to decrease the influence of expectancy effects, which can often result when participants are aware of the purpose of the study so they provide ratings in a socially desirable direction (Gall, Gall, & Borg, 2007). In other words, their regular therapists would not know of the curriculum and its purposes and be much less concerned with their ability to implement it with desirable results. Although the therapists in this study were aware of the purposes of the *Strong Teens* curriculum, and provided measures for the girls, there was a triangulation of data to account for such effects (therapists, supervisor, and the girls all provided ratings). The supervisor ratings enabled a way to examine how exposure to the curriculum generalized into daily life at the RTC. Having additional raters could also shed

light on how generalizable the effects are to different contexts (e.g., teachers, parents, staff, caseworkers) and is certainly recommended for future research with this population.

Another limitation of this study was the high attrition rate. One third of the girls dropped out over the course of the study due to either leaving the program or transferring therapist care. This resulted in a smaller sample size than expected, which decreased the power of the study. Over the course of the study, there were also dozens of girls who entered the RTC. This could have altered the milieu of the RTC and therapy groups, which would likely affect the experience of the girls in the study (for better or worse). While the nature of RTCs and other inpatient settings have an inherent fluctuating population, there may be some procedures that could both improve attrition rates and decrease milieu disruptions. One feasible way would be to administer the curriculum in a shorter period of time. The curriculum has been shown to produce similar therapeutic gains in traditional schools when the amount of time has been cut in half (6-weeks instead of 12-weeks) by teaching two lessons per week (Marchant et al., 2010). This would likely decrease both the attrition rate and the number of patients who would enter the RTC during the course of the study.

One consistent finding was that the girls' self-ratings did not show as much improvement as perceived by the therapists or supervisor. Children and adolescents often lack insight necessary to make accurate reflections of their own behavior and internal functioning (Merrell, 2008). It has also been documented that students with EBDs are additionally disadvantaged at making accurate self-assessments (Rizzo, Steinhausen, & Drechsler, 2010). When considering that 100% of the girls in this RTC had at least one psychiatric disorder and that 73% had at least one externalizing and one internalizing disorder, this population may have been particularly poor

at providing accurate ratings. This concern only enhances the call to have additional rating sources (e.g., parents, teachers, therapists) when working youth in RTCs.

A final limitation was the level of implementation fidelity and shorter-than-suggested lesson time. While *Strong Teens* is not designed to be a comprehensive treatment program, it is designed to be both flexible and adaptable to the instructor and student. Therapists implemented the curriculum with only 62% fidelity, which is 10–20% lower than what has been found in other *Strong Kids* studies (Kramer et al., 2014). There are not many studies of *Strong Teens* which include treatment fidelity or report lesson time. It is suggested that more studies of *Strong Teens* need to be completed documenting strong fidelity and suggested lesson time to document treatment effects with more certainty.

In this study it seemed that therapists spent more time on certain parts of the lesson and skipped over others. Moreover, it would behoove future researcher to investigate which specific SEL topics and/or activities provide the most benefit for this population. Additionally, it would have been advantageous to explore what the most appropriate lesson time is for adolescents attending therapy groups in RTCs. It would have also been helpful and informative to investigate the girls' perceptions of the *Strong Teens* lessons. This collective information could provide a path for the creation of a *Strong Teens* curriculum that is more tailored for youth in RTCs.

Conclusions

While the benefits of SEL exposure has been greatly explored among traditional students (Bierman et al., 2010; Durlak et al., 2011; Greenberg, 2000), this study further investigated the impact SEL has among a more severely affected RTC population. This study examined the consequences of adolescent girls being exposed to the *Strong Teens* SEL curriculum during group therapy by examining changes in social and emotional knowledge, internalizing

symptoms, and resilience from the perspectives of the adolescent girls, therapists, and a supervisor.

Although the girls did not show significant gains in social and emotional knowledge, the results indicated that girls who were exposed to the curriculum showed statistically significant reductions in internalizing symptoms from the perspectives of the supervisor (moderate effect) and girls in the treatment group (large effect). There were also small reductions from the perspective of the therapists in both groups, though not statistically significant. Further, when the girls were exposed to the curriculum they also showed a statistically significant increase in resilience from all perspectives and groups, except for the girls in the treatment group who reported a small increase.

Many students who end up in RTCs have either not responded to interventions or have not maintained therapeutic gains over time (Frensch & Cameron, 2002; Kendrick, 2008). Because the psychiatric disorders of RTC students have typically developed over many years, and because they have been exposed to a myriad of interventions, the therapeutic gains that occurred and maintained in this study were promising. While the *Strong Kids* SEL series is not designed to be a comprehensive treatment, the reduction in internalizing symptoms and improvement in social and emotional resilience observed during this 12-week intervention suggest it may be a helpful component of altering the trajectory of these youth over time.

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Appendix A: Teacher Forms, SSIS Internalizing Subscale

SSIS Internalizing Subscale Teacher Form Sample Items:

"Becomes upset when routines change."

"Withdraws from others."

"Says bad things about self."

"Has low energy or is lethargic."

"Acts anxious with others."

SEARS-T Short Form Sample Items:

"Is comfortable talking to many different people."

"Tries to understand how other students feel when they are not doing well."

"People think she is fun to be with."

"Is dependable, someone you can rely on."

"Thinks of her problems in ways that help."

Appendix B: Student Forms, SSIS Internalizing Subscale

SSIS Internalizing Subscale Student Form Sample Items:

"I'm afraid of a lot of things."

"I often feel sick."

"I get embarrassed easily."

"I feel lonely."

"I think no one cares about me."

SEARS-A Short Form Sample Items:

"I try to help other people when they need help."

"I am good at making decisions."

"I care what happens to other people."

"I know how to calm down when I am stressed out or upset."

"I know how to identify and change my negative thoughts."

Appendix C: *Strong Teens* Knowledge Test

Strong Teens Knowledge Test

Directions: This test has 20 questions about healthy and unhealthy ways to express feelings, thoughts, and behavior. Read each question carefully and pick what you think is the best answer.

TRUE-FALSE. Read each sentence. If you think it is true or mostly true, circle the T, which means "true." If you think it is false or mostly false, circle the F, which means "false."

1. **T F** When most people feel embarrassed, they are likely to stand tall, smile, and talk to others.

2. **T F** When identifying a problem, it is important to describe how you feel and then listen to how the other person says they feel.

3. **T F** Each situation you experience needs to be reframed.

4. **T F** Anger is a natural emotional reaction.

5. **T F** The thinking error "black and white thinking" is when you blame yourself for things that are not your fault.

6. **T F** Clenched fists and trembling hands are often signs of stress.

MULTIPLE CHOICE. Circle the letter that goes along with the best answer for each question.

7. Thinking errors occur when:
   a. You see things differently that what really happened or what might happen
   b. You see both the good and bad of a situation
   c. You think something different than your friend
   d. Someone tells you that you are going to fail

8. An example of an emotion that is uncomfortable for most people is:
   a. Excited
   b. Frustrated
   c. Curious

d. Content

9. Self-talk is a way to calm down after you get angry. Self-talk includes telling yourself:

a. I don't deserve this
b. I should get angry when something like this happens
c. I can work through this
d. I need to stop getting angry so often

10. Which of the following statements best describes empathy?

a. Knowing how you are feeling
b. Wondering why another person is feeling sad
c. Understanding another person's feelings
d. Thinking about another person

11. What is the meaning of the thinking error dark glasses?

a. Looking at the whole picture
b. Seeing only the part that makes you sad
c. Trying to see things in a different way
d. Thinking about only the negative or bad parts of things

12. Reframing is a way to:

a. See the whole picture
b. Think about the things that make you smile
c. Think about the situation more realistically
d. Think about what you will do next

13. Which of the following is not a step for dealing with your feelings?

a. Determine if you feel comfortable or uncomfortable
b. Identify how you feel
c. Tell your friend how you feel
d. Choose three positive or appropriate ways to express that feeling

14. What does the ABCDE plan for optimism help you to do?

a. Look at both sites of a situation
b. View situations more positively
c. Control your positive and negative thoughts
d. Realize that you sometimes have no control over things

15. Conflict resolution is best described as:

a. Discussing a problem until there is a winner and a loser
b. Arguing with another person until they see your point and give in
c. Finding some way to reach an agreement

d. Talking about the problem until something changes their mind

16. Which of the following is a positive way to express how scared you are to tell your parents that you got a detention at school?

a. Tell them why you are scared
b. Hide your report card
c. Tell your parents they are expecting too much from you
d. Say that it happened because other kids at school distracted you

17. Why is it important to make an agreement when you are trying to solve a problem?

a. To understand what the other person is feeling
b. To let the other person know what you think about the problem
c. To make sure both people accept the solution to the problem
d. To solve the problem more quickly

18. Which of the following is an okay or appropriate way of dealing with your anger when the person next to you in class keeps talking and annoying you?

a. Yell at them and tell them to stop
b. Take their backpack or books
c. Stop, count to ten, and try to relax
d. Tell the teacher about the other student

19. Carla's gym teacher wants her to try out for the basketball team, but Carla does not try out, because she thinks she is too short to make the team. What thinking error is described here?

a. Binocular vision
b. Black and white thinking
c. Making it personal
d. Fortune telling

20. Why is it important to evaluate a goal you have set for yourself?

a. To determine if it meets other peoples' expectations of you
b. To decide if it is practical and realistic
c. To be able to compare your goals to those of others
d. To think about what you are doing well in your life

Appendix D: Treatment Fidelity Checklist (example)

Lesson 1: Emotional Strength Training

Observation start time: _____

Tally of opportunities to respond	**Tally of student responses**
Tally of total praise statements	**Tally of total reprimands given**

I. Introduction

Minutes:_____

- Explains to students that new curriculum will be started.
- Explains how often they will receive the curriculum.

Circle One: Not Implemented Partially Implemented Fully Implemented

Notes: _____

II. Introduction to the Topics Covered

Minutes:_____

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

Circle One: Not Implemented Partially Implemented Fully Implemented

Notes: _____

III. Defining Behavior Expectations

Minutes: _____

- Goes over *Strong Teens* rules (respect others, come prepared, personal things stay in group) and sets up any other expectations for the group.
- Uses Supplement 1.2

Circle One: Not Implemented Partially Implemented Fully Implemented

Notes: _____

IV. Discussion of Confidentiality

Minutes:_____

- Shares that group members can choose to share personal stories, and that they can approach the counselor individually if they feel uncomfortable.

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

V. Homework

Minutes:_____

- Provides students with homework (supplement 1.3)
- Explains expectations for completing homework

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

VI. Closure

Minutes:_____

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

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

Observation finish time: _____

Percentage of Components Not Implemented: _____
Percentage of Components Partially Implemented:_____
Percentage of Components Fully Implemented: _____

Appendix E: Social Validity Questionnaire

Please rate the acceptability of the goals and outcomes.	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1. Students' social and emotional concerns are great enough to warrant use of a curriculum such as *Strong Teens*.	1	2	3	4	5
2. A student's level of social and emotional competence is important to their academic success.	1	2	3	4	5
3. It is important that social and emotional knowledge and skills be taught in a school setting.	1	2	3	4	5
4. It is feasible for a regular education teacher to teach social and emotional knowledge and skills.	1	2	3	4	5
5. I feel that I have the necessary skills/training to help students with social and emotional difficulties.	1	2	3	4	5

6. I am confident in my ability to implement *Strong Teens*.	1	2	3	4	5
7. I was able to reinforce the skills taught in the *Strong Teens* lessons during other classroom activities.	1	2	3	4	5
8. The time taken to deliver the weekly lessons was acceptable.	1	2	3	4	5
9. The length of lessons was appropriate for high school students.	1	2	3	4	5
10. The materials provided (manual, pictures, handouts) were sufficient to teach the curriculum.	1	2	3	4	5
11. The materials needed for *Strong Teens* were easy to access.	1	2	3	4	5
12. I felt that the curriculum manual alone provided sufficient training to teach the lessons.	1	2	3	4	5

13. The preparation time required to teach the lessons was acceptable.	1	2	3	4	5
14. Students demonstrated a transfer of knowledge and skills from the lessons to other school situations.	1	2	3	4	5
15. I was satisfied with the social and emotional knowledge and skills demonstrated by my students during the course of the curriculum.	1	2	3	4	5
16. The teaching procedure of the program was consistent with my regular teaching procedures.	1	2	3	4	5
17. *Strong Teens* was a good way to help prevent students' social and emotional problems.	1	2	3	4	5
18. I feel my students learned important skills from *Strong Teens*.	1	2	3	4	5

19. I feel my students use the skills learned from *Strong Teens*.	1	2	3	4	5
20. My students liked *Strong Teens*.	1	2	3	4	5
21. It was reasonable for me to teach the curriculum as it was designed.	1	2	3	4	5
22. I found that *Strong Teens* was easy to teach.	1	2	3	4	5
23. Students were interested in or excited for the lessons, and showed active participation in them.	1	2	3	4	5
24. Most teachers would find *Strong Teens* suitable for improving social and emotional competence.	1	2	3	4	5
25. I would recommend the use of *Strong Teens* to other teachers.	1	2	3	4	5
26. I would like to implement *Strong Teens* again.	1	2	3	4	5
27. I enjoyed teaching *Strong Teens*.	1	2	3	4	5

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

Would you change the way the lessons are taught? How?

What changes would you make to the curriculum content?

What changes did you observe in your students?

Additional comments:

Appendix F: Consent Forms

Group Leader Consent to Participate in *Strong Teens* Study

Dear Group Leader,

Introduction

This research study is being conducted by Luke Marvin, a graduate student at Brigham Young University and night watch supervisor for the Early Adolescent program, together with his faculty advisor Paul Caldarella, Ph.D. This study will evaluate the *Strong Teens* curriculum, a social and emotional learning program, which your school administration has adopted.

Procedures

If you agree to participate in the study you will be asked to complete a 22-item rating scale on each of your students measuring their internalizing symptoms and social and emotional resilience. You will be asked to complete this form on each student a total of four times over the course of 18-weeks; (1) when the study begins, (2) at 6-weeks, (3) at 12-weeks, and (4) at 18-weeks. The amount of time required to complete the form is approximately 5-10 min per student. In addition, a research observer will periodically attend approximately 1/3rd of your *Strong Teens* teaching sessions to record how the lessons are implemented. Finally, you will be asked to complete a 27 item social validity questionnaire at the end of the study, to provide your ratings about the acceptability of *Strong Teens'* goals, procedures, and outcomes.

Risks/Discomforts

There are minimal risks to you for participating in this study. You may possibly feel stress when trying to rate each of your students on the pre- and post-test measures, and it will require 50-100 minutes completing the measures on each occasion (if you have 10 students in your group).

Benefits

There are no direct benefits to you. The results of this study will help further the validation of the *Strong Teens* social and emotional learning curriculum in residential treatment centers, and give new insight on using social and emotional learning in group therapy with at-risk adolescent girls.

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

Compensation

You will receive $50 following the completion of each round of the 22 item evaluations, for a total of $200.

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

Questions about the Research
If you have any questions regarding this study, you may contact Luke Marvin at lukedrewmarv@gmail.com or calling 801-368-2909, or Dr. Paul Caldarella at paul_caldarella@byu.edu or calling (801) 422- 5081.

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

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

Printed Name_____

Signature_____Date_____

Supervisor Consent to Participate in *Strong Teens* Study

Dear Supervisor,

Introduction
This research study is being conducted by Luke Marvin, a graduate student at Brigham Young University and night watch supervisor for the Early Adolescent program, together with his faculty advisor Paul Caldarella, Ph.D. This study will evaluate the *Strong Teens* curriculum, a social and emotional learning program, which your school administration has adopted.

Procedures
If you agree to participate in the study you will be asked to complete a 22-item rating scale on each of your students, measuring their internalizing symptoms and social and emotional resilience. You will be asked to complete this form on each student a total of four times over the course of 18-weeks; when the study begins, at 6-weeks, at 12-weeks, and at 18-weeks. The amount of time required to complete the form is approximately 5-10 min per student.

Risks/Discomforts
There are minimal risks to you for participating in this study. You may possibly feel stress when trying to rate each of your students on the pre- and post-test measures, and it could take several hours to complete the measures on each occasion.

Benefits
There are no direct benefits to you. The results of this study will help further the validation of the *Strong Teens* social and emotional learning curriculum in residential treatment centers, and give new insight on using social and emotional learning in group therapy with at-risk adolescent girls.

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

Compensation
You will receive $60 following the completion of each round of the 22 item evaluations, for a total of $240.

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

Questions about the Research
If you have any questions regarding this study, you may contact Luke Marvin at lukedrewmarv@gmail.com or 801-368-2909, or Dr. Paul Caldarella at paul_caldarella@byu.edu or (801) 422- 5081.

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

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

Printed Name_____

Signature_____Date_____

Student Assent to Participate in *Strong Teens* Study

My name is Luke Marvin. I am a student at Brigham Young University and night watch supervisor for the Provo Canyon School Early Adolescent program.

I am asking you to take part in a research study because I am trying to learn more about how the *Strong Teens* program influences teenagers who are in residential treatment. The *Strong Teens* program will be taught by a therapist at your treatment center during group each week. *Strong Teens* has 12 lessons that cover information about social and emotional learning. Social and emotional learning involves topics like understanding emotions, dealing with anger, letting go of stress, and the power of positive thinking.

If you agree, you will be asked to fill out two brief questionnaires and a quiz on four different occasions over the course of the 12 *Strong Teens* lessons. On these questionnaires you will be asked to rate how often you have engaged in certain behaviors and activities. You will also be asked to provide some information about yourself such as your name, age, and the state you are from. Answering these questions will take between 5 and 10 minutes. The quiz is 20 questions with True/False and multiple choice answers.

You do not have to take part in this study. No one will be mad at you if you decide not to be involved in this study. Even if you first decide to take part and fill out the questionnaires, you can stop later if you want. You are also free to sit out of group at any time if you feel uncomfortable while your therapist is using *Strong Teens*.

If you decide to be in the study, all of your information will be confidential, I will not tell anyone else your answers on the questionnaires. Even if your parents, teachers, or caseworkers ask, I will not tell them about your answers on the questionnaires. At the end of the study there will be a pizza party for those who participate.

By signing below it means that you have read this form, or have had it read to you, and that you are willing to be in this study.

Signature of student: _____

Student's printed name: _____

Signature of Researcher: _____

Date: _____

Appendix G: Social and Emotional Knowledge

Social and Emotional Knowledge Changes Over 12 Strong Teens Lessons

	Lesson 1		Lesson 12				
Group	*M*	*SD*	*M*	*SD*	*t*	*p*	*d*
Treatment (*n*=19)	12.11	2.90	12.53	2.84	-0.80	0.43	0.15
Wait-list (*n*=17)	11.87	3.00	13.12	3.48	-1.32	0.21	0.38[c]

Effect size: c = small

Appendix H: Repeated Measures ANOVA all Raters all Ratings

Repeated Measures Anova

			Week 0		Week 6		Week 12		Week 18		Between Groups		W/in Subjects by time		W/in Subjects group/time	
Variable	Rater	Group	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*	*F*	*p*	*F*	*p*
Social and Emotional Knowledge	Girls	Treatment (n = 16)	12.00	2.67	11.81	2.56	12.69	2.81	12.94	2.89	.72	.40	3.67	.02*	1.01	.39
		Wait-list (n = 14)	12.64	3.18	13.14	2.48	12.79	3.81	13.47	2.97						
Internalizing Symptoms (SSIS)	Girls	Treatment (n = 16)	12.88	3.88	12.00	4.58	9.56	3.58	10.31	4.86	.01	.93	3.21	.03*	1.78	.16
		Wait-list (n = 14)	11.00	4.87	11.64	4.68	10.79	4.32	10.79	5.34						
	Therapists	Treatment (n = 15)	17.33	3.04	14.87	3.70	16.00	4.38	16.47	4.26	.05	.83	1.78	.16	1.05	.38
		Wait-list (n = 13)	17.23	3.59	16.77	5.51	15.31	3.61	16.38	3.64						
	Supervisor	Treatment (n = 17)	16.47	3.00	14.94	3.25	14.06	2.73	14.00	2.92	.54	.47	8.31	.001***	.56	.64
		Wait-list (n = 14)	16.50	3.41	15.48	3.03	15.07	3.43	14.50	3.32						
Resilience (SEARS)	Girls	Treatment (n = 16)	20.19	3.99	21.69	5.62	21.88	5.16	21.50	5.85	1.31	.26	2.45	.07	1.69	.18
		Wait-list (n = 14)	19.00	3.96	18.57	4.77	19.50	4.10	21.29	3.56						
	Therapists	Treatment (n = 15)	10.13	5.13	15.20	5.38	14.47	5.54	14.87	7.19	2.66	.12	8.67	.001***	8.72	.001***
		Wait-list (n = 13)	10.77	3.22	8.15	3.93	12.15	3.29	13.15	3.39						
	Supervisor	Treatment (n = 17)	15.35	4.24	16.06	3.19	18.00	4.82	16.94	4.47	2.06	.16	3.47	.02*	1.64	.19
		Wait-list (n = 14)	14.29	4.36	13.14	3.76	14.50	5.59	16.29	6.79						

p: * = <.05 and *** = <.001