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Evaluation of the Intervention Efficacy of Lions Quest Skills for Adolescence

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College of Social and Behavioral Sciences

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Walden University
2016

Abstract

Evaluation of the Intervention Efficacy of Lions Quest Skills for Adolescence

by

Jennifer Lee Switzer

MA, Liberty University, 2010

BA, Houghton College, 2007

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

General Psychology

Walden University

November 2016

Abstract

Adolescence is characterized as a time of impulsivity, emotional decision-making, and peer influence; thus, interventions targeting the development of effective psychosocial skills are imperative. Improved psychosocial functioning can equip adolescents for successfully overcoming future life challenges. There are few studies that have examined how adolescents' psychosocial skills could be improved in the context of substance abuse prevention program participation. The purpose of this study was to examine changes in psychosocial skills in a group of adolescents who participated in 2 of 10 Lions Quest Skills for Adolescence (Lions Quest SFA) programs being used in central Virginia middle schools. This study examined whether Lions Quest SFA was useful in observing changes in the total score of lagging psychosocial skills, which incorporated measures of impulse control, emotion regulation, and social skills. The adolescent population of interest had already demonstrated weaknesses in these areas as they had been referred to this program from school-based mental health services. This archival study used an ANCOVA to analyze 1-year pre- and posttest score differences on the Assessment of Lagging Skills and Unsolved Problems and examine possible gender differences following participation in the program for 1 school year. The secondary dataset consisted of pre- and posttest scores of 36 male students and 30 female students. The results of this study demonstrated implications for social change as they extended the knowledge in this area by suggesting that participation in the Lions Quest SFA program may contribute to the improvement of psychosocial skills, and these findings could contribute to the improvement of treatment interventions used at Horizon Behavioral Health.

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Dedication

This paper is dedicated to the children and adolescents who are struggling with emotional and behavioral disorders and to the mental health professionals who work tirelessly to support them in having a successful life.

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No one achieves a dream alone. I am so thankful to my mother and grandparents for believing in me and supporting me in every endeavor I chose to do. No soccer game was too far and no psychology topic was too boring--you have always been my biggest fans. To my Pop, you passed before I finished this study, but I know you knew I would always finish. Special thanks to my friends and colleagues who understood the sacrifices needed along this journey, and to my best friend, Jessica, who motivated and supported me throughout this process. I owe a debt of gratitude to Horizon Behavioral Health for training me and cultivating my desire to help today's youth. To my clinical mentors, Dr. Nina Dillon, Genevieve Whittemore, and Sandy Bryant--thank you for exemplifying wisdom and ethics, you are the standard I hold myself to in clinical practice. Thank you to Dr. Giles and Dr. Meis, for your willingness to serve on my committee and for your guidance and support along the way. Lastly, my deepest gratitude to the children and adolescents I have had the privilege of working with throughout my career. You are my motivation to do my very best work.

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Chapter 1: Introduction to the Study

Introduction

Adolescent risk-taking behavior has been identified as the “number one public health problem in the United States” (Gibbons, Kingsbury, & Gerrard, 2012, p. 170). It is the cause for poor decision-making and impulsivity common in adolescence.

Psychosocial skills, including impulse control and self-regulating behaviors, tend to develop through late adolescence (Albert & Steinberg, 2011; Blakemore & Robbins, 2012; Pharo et al., 2011). Many studies have examined the impact of emotional and social skill building on substance abuse and mental health disorders in adolescent populations (Harrell et al., 2009; King et al., 2011; Lanteigne et al., 2014; Lemstra et al., 2010; Mavroveli et al., 2007; Oklan & Henderson, 2014; Reyna & Mills, 2014; Silvers et al., 2012; Tremblay, 2010).

Developing appropriate psychosocial skills in adolescence becomes even more problematic in the context of preventing or treating substance abuse. Research on substance abuse programs has shown that individuals can improve specific psychosocial skills, including impulse control and social skills, as a result of participating in prevention or treatment programs (Carroll et al., 2006; Epstein et al., 2003; Hollon, 2003). However, these studies are limited and primarily focus on adults. These studies point to the need for more research in settings like this.

The Lions Quest SFA program was originally developed as a substance abuse prevention program, and considerable research has been conducted to demonstrate its effectiveness (Eisen, Zellman, & Murray, 2003; U.S. Department of Education, 2006).

However, the program of interest in this study was the Lions Quest SFA for adolescents in a school-based mental health program to improve problematic behaviors that occur in the classroom identified as lagging psychosocial skills. In the remainder of this chapter, I will outline the problem statement, purpose of the study, research questions and hypotheses, theoretical framework, nature of the study, assumptions, scope, limitations, and significance of the research study.

Background

A review of school-based literature revealed that most programs were standalone interventions, addressing one specific problem and failing to comprehensively address the diverse needs of the participating students (Cook et al., 2015; Rones & Hoagwood, 2000). This approach has led to a multiplicity of school-based programs that target the prevention of single problems such as bullying, substance use, self-harm, and suicide (Cook et al., 2015; Fixsen, Blasé, Naoom, & Wallace, 2009). This single-minded focus prompts the question of whether a more universal approach using a program with more broad-spectrum coverage of problematic behaviors would be more effective and relevant to adolescents' academic and life success (Cook et al., 2015; Domitrovich et al., 2010; Osher & Fleischman, 2005). Cook et al. (2015) reported the need for integrated approaches and programs, as few studies have investigated a comprehensive approach to addressing multiple problematic behaviors at the same time (Reinke, Herman, & Ialongo, 2012).

Although studies have been conducted on adolescents' behavioral improvements following participation in Lions Quest SFA, they have primarily focused on the

prevention efforts of substance abuse behaviors. Specifically, Eisen, Zellman, and Murray (2003) reported reductions in alcohol-binging behaviors following a 2-year participation in the program, and the U.S. Department of Education (2006) reported that participation in this program had potentially positive effects on students' behaviors. Prior to this study, the program's intervention efficacy regarding improved psychosocial skills, specifically impulse control, emotion regulation, and social skills, remained unexplored.

Poor impulse control has been identified as a risk factor for both males and females (Gullo & Dawe, 2008; King & Chassin, 2004; Kirisci, Tarter, Reynolds, & Vanyukov, 2006; Mezzich et al., 2007), and while King et al. (2011) found that males tended to have more self-control problems than females, both the males and females who had identified self-control problems did not differ in their rate of change or improvement in either domain over time without intervention. Males more often reported using avoidance strategies to regulate their emotions, while females more often reported using rumination and social support (Blanchard-Fields & Coats, 2008; Silk, Steinberg, & Morris, 2003; Vierhaus, Lohaus, & Ball, 2007; Zimmerman & Iwanski, 2014). Interestingly, Saarni et al. (2006) speculated that gender differences in emotion regulation reflected gender roles in socialization; however, Zimmerman and Iwanski (2014) noted that a study had not yet attempted to replicate gender-specific emotion regulation with a large sample of adolescents. While it has been found that females were more sensitive to social issues than males (Oldehinkel et al., 2007), Verboom et al. (2013) and Vernberg (1991) found that there were no gender differences regarding the cycle that depressive symptoms and deficits in social skills predicted.

Problem Statement

The mental and behavioral health of children and adolescents has quickly become a national concern, and school-based prevention and treatment programs are being researched and developed to prevent problems and promote wellness for both male and female students (Cook et al., 2015). Due to the negative short- and long-term outcomes (school dropout, incarceration, and adult unemployment) for both male and female adolescents with psychosocial problems who do not receive effective interventions (Archambault, Janosz, Morizot, & Pagani, 2009; Nielsen et al., 2011), schools have been tasked with providing programs that teach the necessary competencies to succeed emotionally and socially, in addition to academically (Adelman & Taylor, 2006; Cook et al., 2015; Wagner, Newman, Cameto, & Levine, 2006). The challenges of developing such competencies are exacerbated when the adolescents are abusing alcohol and/or drugs. However, there are few studies that have examined how psychosocial skills could be improved in the context of substance abuse prevention program participation.

Purpose of the Study

The mastery of impulse control, emotion regulation, and social skills are common to adolescent development (Gibbons et al., 2012; King et al., 2011; Lanteigne et al., 2014; Mavroveli et al., 2007; Silvers et al., 2012; Tremblay, 2010); interventions that teach adolescents to effectively control their impulses and emotions and strengthen their adaptive social skills are highly beneficial in helping them successfully navigate the challenges of both adolescence and adulthood (Harrell et al., 2009; Lemstra et al., 2010; McLeod, 2010). Participation in the Lions Quest SFA curriculum has been linked to a

decrease in substance abuse behaviors among adolescents (Eisen et al., 2003; Substance Abuse and Mental Health Services Administration [SAMHSA], 2007; U.S. Department of Education, 2006). While Lions Quest SFA has been studied and used for substance abuse prevention, it had never been examined as an intervention to improve impulse control, emotion regulation, and social functioning. Nevertheless, Lions Quest SFA's emphasis on increasing self-efficacy has been correlated with decreases in adolescents who are already abusing substances (Eisen, Zellman, & Murray, 2003; U.S. Department of Education, 2006), and its alignment with common cognitive behavioral techniques (McLeod, 2010) warranted the exploration of its intervention efficacy in regards to teaching other psychosocial skills. Therefore, the purpose of this quantitative study was to examine the effect of the Lions Quest SFA program on the development of lagging psychosocial skills, which included impulse control, emotion regulation, and positive social skills, that were measured by the combined assessment score on the Assessment of Lagging Skills and Unsolved Problems (ALSUP) checklist. In addition, I also examined the role of gender to see if there were differences in psychosocial skills development between young women and men.

Research Questions and Hypotheses

I chose a correlational design using secondary data to examine change in psychosocial skills over time. The secondary data I used included the combination of impulse control, emotion regulation, and positive social skills. The independent variables were time and gender; specifically, one school year starting in August, when the pretest was completed, and ending in June, when the posttest was completed. The ALSUP score

recorded before intervention was the covariate, and gender was the grouping variable.

The dependent variable was the ALSUP score recorded after intervention, which was the single measure assessment score of lagging psychosocial skills including the combination of impulse control, emotion regulation, and positive social skills. With this study, I addressed the following two specific research questions:

Research Question 1: Does participation in the Lions Quest SFA program improve lagging psychosocial skills defined as the combination of impulse control, emotion regulation, and positive social skills, as measured by the pre- and posttest scores of the ALSUP checklist?

H_01 : Participation in the Lions Quest SFA program does not improve lagging psychosocial skills defined as the combination of impulse control, emotion regulation, and positive social skills, as measured by the pre- and posttest scores of the ALSUP checklist.

H_A1 : Participation in the Lions Quest SFA program does improve lagging psychosocial skills defined as the combination of impulse control, emotion regulation, and positive social skills, as measured by the pre- and posttest scores of the ALSUP checklist.

Research Question #2: Does gender affect the improvement of lagging psychosocial skills defined as the combination of impulse control, emotion regulation, and positive social skills, as measured by the pre- and posttest scores of the ALSUP checklist?

H₀₂: There is no difference in the improvement of lagging psychosocial skills defined as the combination of impulse control, emotion regulation, and positive social skills, as measured by the pre- and posttest scores of the ALSUP checklist between males and females.

H_{A2}: There is a difference in the improvement of lagging psychosocial skills defined as the combination of impulse control, emotion regulation, and positive social skills, as measured by the pre- and posttest scores of the ALSUP checklist between males and females.

Theoretical Framework

Erikson's (1950, 1963) psychosocial theory of child development provided the groundwork for understanding the importance of the development of psychosocial skills. Erikson's theory of psychosocial development highlighted the fundamental importance of social interactions (Dunn et al., 2012; Feldman, 2008; Ro & Clark, 2013), and focused on the development of communication and interpersonal skills that lead to healthy relationships with others, including impulse control and empathy (Ro & Clark, 2013). This theory outlined adolescence as highly formative years for decision-making, as short-term benefits are generally considered more important than long-term consequences (Erikson, 1950, 1963; Gibbons et al., 2012). This vulnerability in adolescence highlighted the need for interventions that could strengthen weak or lagging psychosocial skills.

As applied to this study, psychosocial theory explained the developmental process of psychosocial skills and emphasized the importance of these skills in positive interpersonal relations (Erikson, 1950, 1963; Ro & Clark, 2013). The psychosocial theory

of child development posited that developmental maturation of psychosocial skills, including impulse control and self-regulatory behaviors, continues through adolescence (Albert & Steinberg, 2011; Blakemore & Robbins, 2012; Erikson, 1950, 1963; Pharo et al., 2011). As such, interventions have often been used to support psychosocial skill development in children and adolescents who have identified weaknesses (King et al., 2011; Lanteigne et al., 2014; Mavroveli et al., 2007; Silvers et al., 2012; Tremblay, 2010).

Lions Quest SFA is presented in a group session format to adolescents and includes the psychosocial approach of group-based skill training using role-playing and peer teaching, to enhance emotional and social competencies (SAMHSA, 2007). I used Erikson's psychosocial theoretical framework in this study to understand psychosocial skill development. I will discuss the theory in more detail in Chapter 2.

Nature of the Study

Horizon Behavioral Health, a community services board in central Virginia, used the Lions Quest SFA program as a prevention method for substance abuse in adolescents receiving school-based mental health services. Students who received school-based mental health services had been identified based on their emotional or behavioral problems, as needing additional mental health support in the classroom setting. These adolescents had demonstrated weaknesses in their psychosocial skills, and although the Lions Quest SFA program was not designed to address the skills and cognitive elements associated with impulse control, emotion regulation, and social functioning, the program could have addressed deficits in psychosocial skills. The Lions Quest SFA program does

not have an assessment tool; however, in this research study, I examined a specific application of Lions Quest SFA that has been, and at the time of the study was being, evaluated by the ALSUP checklist. The ALSUP was utilized to identify and rank common psychosocial skills used in the school setting, and pre- and posttest scores were relied upon to highlight improvements in psychosocial skills that included impulse control, emotion regulation, and positive social skills. The resulting assessment score was the combination of these three identified psychosocial skills.

In this quantitative research study, I used secondary data. This correlational design was chosen due to the analysis of pre- and posttest data to identify if lagging psychosocial skills, that included in this research project the combination of impulse control, emotion regulation, and positive social skills, were improved as a result of participation in the Lion Quest SFA program. The independent variables were time and gender; specifically, one school year starting in August, when the pretest was completed, and ending in June, when the posttest was completed. The ALSUP score recorded before intervention was the covariate, and gender was the grouping variable. The dependent variable was the ALSUP score recorded after intervention, which was the single measure assessment score of lagging psychosocial skills including the combination of impulse control, emotion regulation, and positive social skills. I used an ANCOVA to analyze the pre- and posttest data and identify possible gender differences.

Definitions

The following key terms are defined to provide clarity to this study. The main terms, in addition to more common terms, are also defined to eliminate confusion between other definitions appropriate for different contexts:

Emotion dysregulation: Difficulty in the areas of awareness, understanding, and acceptance of one's emotions, often including the inability to control impulses or behave in a manner that is consistent with one's goals when experiencing negative emotions (Marganska, Gallagher, & Miranda, 2013). These difficulties compromise an individual's ability to use appropriate emotion regulation strategies to cope with a present situation.

Emotion regulation: Any effort that an individual makes to moderate or control their emotional experience (Gross, 2002; Watford & Stafford, 2015). It is generally referred to as a set of skills or strategies that are used to either enhance or suppress an emotional reaction (Marganska, Gallagher, & Miranda, 2013).

Impulsivity: Difficulty in the areas of future-oriented planning, organization, focus and concentration on task, and appropriate decision-making (Berg, Litzman, Bliwise, & Lilienfeld, 2015). Deficits in these areas often result in risky behaviors, as short-term sensations and rewards are prioritized over long-term consequences (Berg et al., 2015; Block, 1995).

Psychosocial skills: A multifaceted construct comprised of skills related to attention, cognitive flexibility, self-monitoring abilities, impulse control, social engagement, and social skill knowledge (Baumesiter, Schmeichel, & Vohs, 2007; Evans, Owens, & Bunford, 2013; Pfiffner et al., 2014; Robbins, Lauer, Davis, Langley, & Carlstrom, 2004; Suchy, 2009).

Social skills: The ability to process social information and to engage in appropriate social behaviors based on differing situations (Fraser et al., 2005). Numerous factors impact the way an individual accrues and processes social knowledge including early life experiences, biological predispositions of arousal, contextual influences, parenting style, and peer acceptance or rejection (Fraser et al., 2005). These factors shape how an individual processes social information, which in turn dictates how they will behave in specific social situations.

Although many of these terms are common and relatively unambiguous, they were defined to add clarity and prevent any possible confusion. Much of the literature discussed in Chapter 2 highlights similar definitions of the key terms, and most of the definitions are founded within the psychosocial theory of child development.

Assumptions

My primary assumption in this study was that any behavioral improvements of the adolescents were a direct result of their participation in the Lions Quest SFA program, not taking into consideration other treatment interventions by mental health and school staff that could have occurred. Therefore, other avenues of treatment and psychological support should be considered when discussing improvements in an adolescent's psychosocial skill development (Aldao & Nolen-Hoeksema, 2012; Campbell-Heider, Tuttle, & Knapp, 2009; Harrell, Mercer, & DeRosier, 2009). Additionally, differences in service delivery by the mental health professionals could have existed and could have impacted an adolescent's willingness to participate and the detail of content covered in each session. It was assumed that the staff were trained and correctly implemented the

Lions Quest SFA program. It should be noted that I worked for Horizon Behavioral Health at the time of the study; however, I was never present at or involved with any of the programs addressed in this study. As with all secondary data research, there was the assumption that the secondary data were reported, collected, and stored reliably. Lastly, it was assumed that the findings of this study would be applicable to other applications of Lions Quest SFA with adolescents.

Scope and Delimitations

Although Lions Quest SFA has been studied and used for substance abuse prevention, it had never been studied in the context of using the program to impact impulse control, emotion regulation, and social functioning. In this study, I examined a specific application of Lions Quest SFA that has been, and at the time of the study was being, used in group sessions with adolescents who already had a demonstrated weakness in these psychosocial skills based on their need for school-based mental health services through Horizon Behavioral Health. It should be noted that I worked for Horizon Behavioral Health at the time of the study, and the secondary data set chosen for this study was based on convenience. This study's secondary data set included the gender and pre- and posttest ALSUP scores from adolescents participating in the Lions Quest SFA program through school-based mental health services in 2014 and was obtained through Horizon Behavioral Health's privacy officer.

Pre- and posttest ALSUP scores that were not based on the one school year's participation in Lions Quest SFA were not included in the secondary data set. Specifically, the data set only included pre-test scores completed in August 2013 and

posttest scores completed in June, 2014, from two central Virginia schools. As stated, this study had two prominent delimitations: convenience of the data set (posing threats to both internal and external validity) and the limitations of the ALSUP as the assessment tool (construct validity). I relied upon the ALSUP pre- and posttest scores upon to identify improvements in psychosocial skills. The assessment score was a combination of psychosocial skills, as the ALSUP does not provide subscores for each individual skill.

Limitations

There were two concerns that threatened the construct validity of the measurement tool. I used the ALSUP to identify potential improvements in psychosocial skills that included well-known concepts of impulse control, emotion regulation, and positive social skills. However, the score was a combination of these skills, as the ALSUP does not provide subscores for any of these concepts. Therefore, it was not possible to determine (a) if these dimensions were actually relevant to change and (b) the relative importance of each of the dimensions.

Although the ALSUP checklist has face validity (i.e., it appears to measure the identified construct), measurement validity and reliability have not been tested or documented (Campbell & Stanley, 1963; Creswell, 2009; Frankfort-Nachmias & Nachmias, 2008). This study did not have a control group and there was no manipulated independent variable. The absence of these attributes means the researcher could not minimize the effects of potentially confounding variables (Creswell, 2009; Frankfort-Nachmias & Nachmias, 2008). The study had a serious limitation for generalizability since it was not a random sample; therefore, the findings should not be generalized to the

larger population. However, the data came from a real-world setting, and this strengthened the ecological validity of the study (Creswell, 2009).

Significance

This research study contained potential implications for social change, as the findings of this study could contribute to the improvement of treatment interventions used at Horizon Behavioral Health. Specifically, if there were no improvements in psychosocial skill development, the findings could save the time and effort of the adolescents who are participating in the Lions Quest SFA program, as a more effective intervention could be used to meet their behavioral and emotional needs. However, if there were improvements in psychosocial skill development, the Lions Quest SFA program could meet the need for a more universal program that covers multiple lagging skills, as opposed to the numerous programs that only target single problems. The findings of this could identify Lions Quest SFA as a school-based intervention program that improves these psychosocial skills in adolescents, in addition to preventing substance abuse. In this study, I also examined gender to see if this individual difference would be important to consider in understanding how to work with this population. I intend to present the study's findings to the CEO and Board of Directors for Horizon Behavioral Health, along with a local presentation to central Virginia school administrators.

Summary

The purpose of this quantitative study was to examine the effect of the Lions Quest SFA program on the development of lagging psychosocial skills, including impulse control, emotion regulation, and positive social skills, and measure those skills by the

combined assessment score on the ALSUP checklist. In Chapter 2, I will focus on a review of the literature about psychosocial skills, including impulse control, emotion regulation, and social skills, along with gender differences in these skills. Additionally, the theoretical framework of this study and the existing literature on the Lions Quest SFA program will be explored. The foundation of research on this topic will be established in the literature review of Chapter 2, while the research design, data collection and analysis methodology, and ethical considerations will be outlined in Chapter 3. The data collection process and statistical results will be discussed in Chapter 4, and Chapter 5 will conclude with a discussion regarding the limitations of the study and the recommendations and implications for future research based on the findings of this study.

Chapter 2: Literature Review

Introduction

The purpose of this research study was to identify whether adolescents participating in the Lions Quest SFA program improved in lagging social skills and whether gender made a difference in the how much change was observed. The relationship between adolescence and psychosocial skills has been thoroughly addressed over the years (King et al., 2011; Lanteigne et al., 2014; Mavroveli et al., 2007; Silvers et al., 2012; Tremblay, 2010), along with the consequences and dangers that deficits in these skills can often lead to (Castellanos-Ryan et al., 2013; King et al., 2011; Pharo et al., 2011; Tremblay, 2010; Walters, 2014). Thus, interventions that focus on psychosocial skill development in adolescence will benefit this population.

I will begin this chapter with a presentation of the theoretical framework grounded in the psychosocial theory of child development. The tenets of this theory highlight the developmental process of psychosocial skills and emphasize the importance of these skills in positive interpersonal relations (Ro & Clark, 2013). Following that, this review will cover the current research on psychosocial skills, specifically impulse control, emotion regulation, and social skills, along with gender differences in these skills, and existing research examining the interventions that have been used to improve such skills.

Literature Search Strategy

I conducted a search of literature digitally through electronic databases including PsycARTICLES, PsycINFO, and SAGE Premier. The list of keyword search terms I used

to conduct the literature review included *adolescence, psychosocial development, psychosocial skills, Lions Quest curriculum, school-based interventions, impulsivity, emotion regulation, and social skills*. The articles collected and examined for this study were obtained digitally, and numerous books were also reviewed to provide the background on existing adolescent development research. Most of the articles cited throughout this literature review were peer reviewed and published within the last 5 years; however, to maximize the evidentiary support of the study, a few articles published within the last 10 years were included due to their important findings regarding this research topic.

Theoretical Foundation

Erikson's (1950, 1963) theory of psychosocial development highlighted the fundamental importance of an individual's social interactions with those around them (Feldman, 2008). Erikson argued that individuals continue to develop throughout their lifespan as they progress through various challenges common to their specific age group (Feldman, 2008). Specifically, Erikson emphasized that the primary challenge or crisis during adolescence is the search for one's identity and the assessment of one's capabilities, skills, and limitations in understanding the potential roles they may play in adulthood. Specifically, psychosocial development throughout adolescence includes important social transitions, such as exploring one's identity, creating meaningful relationships, and navigating one's differentiation from their parents (Erikson, 1950, 1963; Roisman, Masten, Coatsworth, & Tellegen, 2004; Verboom et al., 2013). Furthermore, reliance on friends and the pressures of societal influences peak during

adolescence, creating additional factors that may hinder or bolster an adolescent's decision-making processes and overall functioning (Erikson, 1950, 1963; Feldman, 2008).

Psychosocial development and functioning is categorized into three sections: basic, self-mastery, and social/interpersonal functioning (Ro & Clark, 2013). Basic functioning includes lower level behaviors such as self-care and necessary communication skills; however, self-mastery and social/interpersonal functioning are essential to healthy adolescent development (Erikson, 1950, 1963; Ro & Clark, 2013). Self-mastery includes the functional capacity to exercise impulse-control, while social/interpersonal functioning addresses an adolescent's ability to form and maintain positive relationships, along with demonstrating higher order social skills such as empathy for others (Ro & Clark, 2013). Blair et al. (2015) highlighted that almost all social interactions involve emotion regulation and discussed the parallel between emotional and social development. Additionally, previous research has documented the implications of emotion regulation on the development of socially appropriate behaviors and adaptive social functioning (Eisenberg, Hofer, & Vaughan, 2007; Rose- Krasnor & Denham, 2009).

Although social factors are highly influential on behavior throughout the lifespan, the implications of peer presence seem to peak during the adolescent years (Erikson, 1950, 1963; Gibbons et al., 2012). The psychosocial theory of development highlighted the differences in decision-making processes between adolescence and adulthood and emphasized that while risk and reward assessments tend to be similar in both populations,

adolescents generally weigh rewards greater than risks and prefer short-term rewards, reflective of impulsive decision-making (Gibbons et al., 2012). Gibbons et al. (2012) noted that in addition to developmental considerations, impulse control was significantly impacted by social factors, as evidenced by brain regions affiliated with reward being more activated in the presence of peers.

Dunn et al. (2012) found that effective interventions that teach impulse control, emotion regulation, and social skills and contribute to an adolescent's overall psychosocial functioning, help adolescents to be more adaptive and successful in meeting demands and challenges across various domains. While the Lions Quest SFA program has been studied and used for substance abuse prevention efforts, it has never been studied in the context of using the program to teach psychosocial skills. With this study, I attempted to address this gap and identify whether the Lions Quest SFA program being used in several central Virginia middle schools as a prevention program, was actually developing lagging psychosocial skills, defined in this research project as the combination of impulse control, emotion regulation, and positive social skills.

Lagging Adolescent Psychosocial Skills

Scope of the Problem

The term *psychosocial skills* refers to a multifaceted construct comprised of skills related to attention, cognitive flexibility, impulse control, and social functioning (Baumesiter, Schmeichel, & Vohs, 2007; Evans, Owens, & Bunford, 2013; Piffner et al., 2014; Robbins, Lauver, Davis, Langley, & Carlstrom, 2004; Suchy, 2009). There is ample evidence documenting the relationship between adequate psychosocial skill

development in adolescence and many critical adult life outcomes. New and complex social expectations present adolescents with a variety of challenges (Taylor et al., 2015), as they are in a developmental transition and are sensitive to environmental influences (U.S. Department of Health and Human Services, 2013). Deficits in the ability to relate to one's parents, peers, and teachers place youth who lack these skills at greater risk for school failure (Woodward & Fergusson, 2000), substance use (Gullo & Dawe, 2008; Pharo et al., 2011), psychopathology (Gross & Jazaieri, 2014; Werner & Gross, 2010), suicide (Carney, 2000), and adjustment problems in adult life (Caldarella & Merrill, 1997). In fact, the U.S. Department of Health and Human Services' (2013) Healthy People 2020 initiative included adolescent health as one of its key 2020 objectives, focusing on the prevention and treatment of adolescent mental health, sexual behavior, and violence.

A major emerging issue in health care is the “increased focus on the use of positive youth development interventions for preventing adolescent health risk behaviors” (U.S. Department of Health and Human Services, 2013, p. 2). Addressing important psychosocial skills facilitates an alignment with healthy behaviors and helps to promote a healthy and productive adulthood (McNeely & Blanchard, 2009). Researchers have found recent empirical evidence that youth development interventions can lead to positive emotional and behavioral outcomes (Birkhead, Riser, & Mesler, 2009); thus, ongoing evaluation is needed to identify how successful interventions can be applied.

Psychosocial Skills

The three identified skills that have received considerable attention in the literature are: impulse control, emotion regulation, and social skills. These skills are imperative to healthy development and are vital indicators of an individual's ability to successfully navigate the challenges and transitions of adolescence (U.S. Department of Health and Human Services, 2013). I will explore these three psychosocial skills in more depth in the remainder of this chapter. In addition, research on gender differences in each of these domains will be presented, as the research consistently reports important differences between young men and women.

Impulse control. The ability to control one's impulses is central to cognitive, emotional, and social functioning (Stahl et al., 2014). Impulsive behaviors tend to be identified when an individual acts or reacts in a manner that is incompatible with their long-term goals (Rauch, Gold, & Schmitt, 2012; Stahl et al., 2014). Impulsivity is a common symptom in many psychiatric disorders and includes the failure to control an impulse that could be potentially harmful to oneself or others (Lipszyc & Schachar, 2010; Rauch et al., 2012; Stahl et al., 2014). Impulsivity is a multifaceted construct and includes three main components of interference control: control of stimulus interference, proactive interference, and response interference (Nee, Jonides, & Berman, 2007; Nigg, 2000; Stahl et al., 2014; Unsworth, 2010).

Impulse control is closely related to both delay of gratification (Mischel et al., 2011) and motivational processes (Nigg, 2000). Additionally, it is a pivotal factor in adolescent decision-making (Rauch et al., 2012; Reynolds, Penfold, & Patak, 2008; Steinbeis, Bernhardt, & Singer, 2012). Specifically, impulse control is the ability to

pursue long-term goals despite the interference of impulses that could potentially distract or deter an adolescent from their achievement of those goals (Rauch et al., 2012; Stahl et al., 2014).

Blakemore and Robbins (2012) found that hypersensitivity in reward-processing brain regions (the dopaminergic reward system, including the ventral striatum), along with the relatively slow development of the prefrontal systems implicated in impulse and inhibitory control, may significantly contribute to the increase in risky behavior associated with adolescence. In addition to this asymmetrical functional development within the dopaminergic reward system (Blakemore & Robbins, 2012), individual differences in brain system integration and efficiency (primarily in the prefrontal cortex) were also correlated with impulsive and risky adolescent behaviors (Pharo et al., 2011). Specifically, Pharo et al. (2011) found that problematic behaviors such as impulsivity and aggression were related to increased levels of risky behaviors and that it was highly probable that adolescents' reckless behaviors were indicative of the ongoing maturation of the prefrontal cortex and related structures.

Furthermore, Pharo et al. (2011) concluded that during the majority of an individual's adolescent years, the brain's inhibitory system is asymmetrical with the excitatory systems (sensation-seeking), resulting in increased levels of risky behaviors. Although an adolescent's ventral striatum (area of the brain that is responsive to reward cues) is generally developed, their dorsolateral prefrontal cortex (responsible for cognitive and impulse control) does not develop until early adulthood (Casey, Jones, & Hare, 2008; Galvan et al., 2006; Gibbons et al., 2012). Their incomplete brain

development often results in an increased vulnerability to impulsive decision-making, as they choose short-term rewards over long-term consequences (Blakemore & Robbins, 2012).

Gender differences in impulse control. While it is known that males and females vary in their rates of substance abuse (Johnston et al., 2008), poor impulse control has been identified as a risk factor for alcohol and substance abuse for both males and females (Gullo & Dawe, 2008; King & Chassin, 2004; Kirisci, Tarter, Reynolds, & Vanyukov, 2006; Mezzich et al., 2007). King et al. (2011) found a major gender difference regarding impulsivity in that males tended to have more self-control and attention problems than females; however, both the males and females who had identified self-control and attention problems did not differ in their rate of change or improvement in either domain over time. Moreover, of the adolescents identified with self-control problems, females used cigarettes more than males (King et al., 2011). Walters (2014) found that adolescents who engaged in both substance abuse and criminal behavior had high scores on measures of impulsivity and unemotionality and had low scores on measures of impulse control and suppression of aggression. However, it was noted that more males were identified as engaging in criminal behavior, or both engaging in criminal behavior and substance abuse, than females (Walters, 2014).

Emotion regulation. Emotion regulation addresses the duration or magnitude of an emotional response and includes the goal of either increasing or decreasing those attributes of the response (Gross, 2013; Gross, Sheppes, & Urry, 2011). It is important to note that the realm of emotion regulation ranges from conscious, controlled, and effortful

to unconscious, automatic, and effortless (Gross, 2013; Gyurak, Gross, & Etkin, 2011; Mauss, Bunge, & Gross, 2007). Nevertheless, as emotions arise, physiological and behavioral responses are often included as well (Gross & Jazaieri, 2014). While emotion regulation consists of all processes that are involved in altering an emotional state, it varies from coping in that it also includes the regulation of positive emotions, the anticipation of possible emotional triggers, and the evaluative process of emotional arousal (Gross & Thompson, 2007; Zimmerman & Iwanski, 2014).

These varied responses are encompassed within an individual's emotional reactivity and are beneficial in highlighting the attentional and evaluative processes that result in an individual's multisystem whole-body response (Gross & Jazaieri, 2014; Gross & Thompson, 2007). Emotion regulation occurs when an individual either consciously or unconsciously sets a goal to influence the emotional process (Gross & Jazaieri, 2014; Gross, Sheppes, & Urry, 2011). Gross (2013) highlighted that emotion regulation can be either intrinsic or extrinsic, with the goal of altering the emotion response being initiated by the individual (intrinsic) or by another person through interpersonal interactions (extrinsic).

According to Gross and Jazaieri (2014), adaptive emotion regulation includes three important factors: awareness, goals, and strategies. Awareness of one's emotions, along with an understanding of the situation that activated them, is imperative regardless of whether the regulation is implicit or explicit, as this awareness will either strengthen or limit the range of strategies available for regulation (Barrett, Gross, Conner, & Benvenuto, 2001; Farb, Anderson, Irving, & Segal, 2014). The goal in emotion regulation

is the result that the individual wants to achieve including increasing or decreasing the intensity, duration, or magnitude of the emotional experience (Gross & Jazaieri, 2014). Lastly, specific strategies are utilized to achieve the emotion regulation goal (Gross, 1998; Gross & Jazaieri, 2014; Webb, Miles, & Sheeran, 2012), and strategies can be either adaptive or maladaptive in achieving the goal (Aldao & Nolen-Hoeksema, 2012; Gross, 2013; Parkinson & Totterdell, 1999; Webb et al., 2012). It is important to note that if one of these factors (awareness, goals, or strategies) are absent or stunted, an individual's ability to regulate their emotions in an adaptive and appropriate manner may be hindered.

Zimmerman and Iwanski (2014) reported developmental changes and age-specific preferences in many emotion regulation strategies, with a general trend towards more adaptive regulation as age increased. Zimmerman and Iwanski noted that the time period with the fewest emotion regulation strategies was middle adolescence. Moreover, middle adolescence is considered a developmental time that includes intense stressors and negative emotions (Lerner & Steinberg, 2009; Silk et al., 2003; Zimmerman & Iwanski, 2014), in addition to unstable peer relationships (Furman & Collins, 2009) and conflict with parents (Laursen, Coy, & Collins, 1998).

As discussed, the increased emotionality in adolescence may be due to biological changes to the prefrontal cortex and related structures responsible for reward dependency (Somerville, Jones, & Casey, 2010); however, Zimmerman and Iwanski (2014) posited that it may also be reflective of developmental changes and age differences in the emotion regulation process. As an individual's cognitive, emotional, and social

development progresses, their emotional understanding becomes more sophisticated including long-term goals, recognition of their own and other's feelings, and the capability for insight into their own emotion-driven behaviors (Saarni et al., 2006; Thompson, 2011; Zimmerman, 1999). Adrian, Zeman, and Veits (2011) reported that numerous emotion regulation strategies develop in childhood, and Garnefski and Kraaij (2006) added that those strategies become increasingly more cognitive-based as the individual matures through adolescence.

Research regarding the development of emotion regulation strategies was mixed, as Blanchard-Fields and Coats (2008) found that adolescents rely more heavily on passive emotion regulation such as suppression or denial, while John and Gross (2004) found that suppression was utilized less as adolescents transitioned to adulthood. Zimmerman and Iwanski (2014) suggested that these diverging results were due to the assumption in many research studies that individuals use the same emotion regulation strategies for all emotions. Rather, Zimmerman and Iwanski outlined that the pattern for emotion-specific regulation strategies can be seen in infancy and childhood, and should be considered plausible for the remainder of the lifespan. Moreover, Endrerud and Vikan (2007) highlighted that strategy use and effectiveness for emotion regulation varies at all ages, and that even the effectiveness of an adolescent's specific strategy may vary depending on the intensity of an emotion.

Implications of emotion dysregulation. While the consequences of impulsivity have already been discussed including risky or criminal behaviors, deficits in emotion regulation have been linked to psychopathology and cognitive inflexibility. Deficits in

emotion regulation have been linked to many psychiatric disorders, with estimates from 40% to 75% of disorders containing emotion dysregulation (Berenbaum, Raghavan, Le, Vernon, & Gomez, 2003; Gross & Jazaieri, 2014; Gross & Muñoz, 1995; Jazaieri, Urry, & Gross, 2013; Kring, 2008, 2010; Kring & Werner, 2004; Werner & Gross, 2010).

Some disorders include emotion dysregulation as a primary symptom such as autism, attention-deficit/hyperactivity disorder (ADHD), and schizophrenia (Mazefsky, Pelphrey, & Dahl, 2012; Nigg, 2000), while anxiety and mood disorders are identified by the deficits in emotion regulation that lead to a dysregulated emotional state (American Psychiatric Association, 2013). Gross and Jazaieri (2014) highlighted that problematic emotional intensity may lead to hyperactivity to negative emotions resulting in social anxiety disorder or major depressive disorder, or problematic emotional awareness may result in a panic disorder (hyperawareness) or bulimia nervosa (lack of awareness).

As discussed, goal-setting and effective strategies are essential in adaptive emotion regulation; thus, deficits in these areas can also contribute to psychopathology (Gross & Jazaieri, 2014). Healthy goal setting is evident when an individual weighs short- and long-term interests and balances them appropriately (Gross & Jazaieri, 2014); however, Bipolar I Disorder is an example of regulation goals that are dysfunctional, as many individuals experiencing those symptoms of grandiosity, racing thoughts, and euphoria are uninterested in regulating their emotional state (American Psychiatric Association, 2013; Gross & Jazaieri, 2014). Lastly, problematic emotion regulation strategies are common in psychiatric disorders, including both the choice of strategy and the overall implementation of the chosen strategy (Gross & Jazaieri, 2014). An example

of a dysfunctional choice in regulation strategy can be seen in an individual with agoraphobia who actively avoids feared locations and situations, while dysfunctional implementation of a regulation strategy can be seen in an individual with ADHD who has difficulty achieving their emotion regulation goal due to their symptoms of poor concentration, high distractibility, and deficits in memory (American Psychiatric Association, 2013; Gross & Jazaieri, 2014).

An important consideration regarding the availability of resources and cognitive demands of emotion regulation should be made, as the effectiveness of goal setting and specific strategies are inconsequential if they are unlikely to be chosen or unable to be utilized due to the unavailability of cognitive resources (Gross & Jazaieri, 2014; Urry & Gross, 2010). Joormann and Vanderlind (2014) and Joormann, Yoon, and Siemer (2010) highlighted the importance of cognition in emotion regulation, as differences in cognitive control and abilities affect an individual's ability to regulate their affect. Cognitive control and flexibility are paramount to an appropriate emotional and behavioral response to new and changing situations (Hasher, Zacks, & May, 1999; Joormann & Vanderlind, 2014; Miyake & Friedman, 2012); however, the limitations of adolescence present a challenge to adaptive emotion regulation during this developmental phase, and a potential vulnerability to the complications of emotion dysregulation.

Gender differences in emotion regulation. Gender-specific preferences for both emotion regulation and expression seem to begin in middle childhood and early adolescence (Chaplin & Aldao, 2013; Zimmerman & Iwanski, 2014). Males more often report using avoidance strategies, while females more often report using rumination and

social support (Blanchard-Fields & Coats, 2008; Silk, Steinberg, & Morris, 2003; Vierhaus, Lohaus, & Ball, 2007; Zimmerman & Iwanski, 2014). Saarni et al. (2006) speculated that gender differences in emotion regulation may reflect gender roles in socialization; however, a study has not yet attempted to replicate gender-specific emotion regulation with a large sample of adolescents (Zimmerman & Iwanski, 2014). Blakemore and Robbins (2012) reported that an adolescent's developing social brain was important in their decision-making, as emotion and social factors were highly influential in shaping and predicting adolescents' decision-making processes.

Social skills. The competency-based model of depression indicates an underlying relationship between poor social functioning and depressive symptoms in adolescence (Cole, 1991; Verboom et al., 2013). Specifically, children and adolescents with social deficits may receive negative peer feedback, triggering the onset of depressive symptoms (Verboom et al., 2013). The competency-based model asserts that children create their self-perception based on others' opinions of them; thus, a child who experiences negative peer feedback may adopt the negative view and develop a negative self-perception (Cole, 1991; Verboom et al., 2013). A child's negative self-perception makes them increasingly more vulnerable to the risk of depressive problems as they continue their development into adolescence (Verboom et al., 2013). Consequently, associations between an adolescent's perceived social well-being, such as their beliefs about their peer relationships, and actual social problems have been identified (Garnefski, 2000; Verboom et al., 2013).

Social problems can include strained relations with others, along with motor

difficulties that are often linked to poor social functioning such as speech impairments, tics, poor spatial awareness, and being clumsy (Verboom et al., 2013). Verboom et al. (2013) suggested that social problems may lead to negative peer responses, and increase depressive problems. Regardless of this plausible role of peer evaluations, several studies have linked poor social functioning and social problems to depressive symptoms (Garnefski, 2000; Groeben, Perren, Stadelmann, & von Klitzing, 2011; Verboom et al., 2013; Vernberg, 1990). Lastly, some studies have found a cycle in which social problems have increased depressive symptoms, and increased depressive symptoms have increased the likelihood of poor social functioning (Verboom et al., 2013; Vernberg, 1991). Vernberg (1991) concluded that depressive problems and poor social functioning predict each other over time.

Gender differences in social skills. It has been found that females were more sensitive to social issues than males (Oldehinkel et al., 2007). However, Verboom et al. (2013) and Vernberg (1991) found that there were no gender differences regarding the cycle that depressive symptoms and poor social functioning predicted each other. Another study found a higher association between depressive issues and poor academic performance in males (Derdikman-Eiron et al., 2011), while other studies found a higher association between depressive symptoms and overall functional impairment in females (Nagar, Sherer, Chen, & Aparasu, 2010; Undheim & Sund, 2005).

Protective Factors

Despite these prevalent risk factors within adolescent psychosocial development, protective factors have also been identified to strengthen an individual's overall social

functioning. Mavroveli et al. (2007) reported that trait emotional intelligence (EI) was positively associated with prosocial behaviors, leadership qualities, and adaptive coping styles in male and female adolescents. Adolescents with higher levels of trait EI experienced less peer rejection, which is a common precursor of social withdrawal, isolation, and depression within this age group (Mavroveli et al., 2007). Moreover, social competence was correlated with lower levels of delinquency and antisocial behavior, and it was concluded that EI may serve as a protective factor, as peer relationships are essential to emotional and social development in adolescence (Mavroveli et al., 2007).

In addition, recent studies in the area of social neuroscience have discovered that the processing imbalance between an adolescent's dopaminergic reward system and their prefrontal systems is exacerbated by social factors (Gibbons et al., 2012). For example, when compared to adults' brains, adolescents' ventral striatums (reward centers) are more active around their friends and peers (Chein, Albert, O'Brien, Uckert, & Steinberg, 2011). This increased activity in the reward centers of an adolescent brain predicts impulsive and risky behavior when in the presence of peers. More specifically, the rewards of impulsive behaviors such as reckless driving and substance use are increased when done in the presence of friends (Gibbons et al., 2012).

Interventions for Psychosocial Skill Development

Other studies have been conducted to examine the impact of teaching psychosocial skills (Harrell et al., 2009; Lemstra et al., 2010; Oklan & Henderson, 2014; Reyna & Mills, 2014). However, a review of school-based literature revealed a common problem with many existing programs in that they only addressed one specific behavioral

problem or lagging psychosocial skill, and lacked the diversity to comprehensively address multiple behaviors or skills (Cook et al., 2015; Rones & Hoagwood, 2000). Based on their findings, Harrell et al. (2009) reported increased social self-efficacy and global self-concept, along with a decrease in problematic internalizing behaviors (depression and anxiety), following participation in a program designed to improve social skills deficits in adolescents. Harrell et al. concluded that improving adolescents' self-efficacy was imperative, as it was often predictive of future social behavior, and a protective factor for later maladjustment due to the importance placed on interpersonal relationships. The findings presented in Harrell et al. bolstered the evidence of intervention efficacy of general social skills programs in addressing emotional and behavioral issues in adolescence.

Lemstra et al. (2010) reviewed school-based marijuana and alcohol prevention programs for adolescents, and found that programs that included assertiveness and social skills training, in addition to anti-drug information, were the most effective in reducing marijuana and alcohol use. It was suggested that many adolescent behaviors are interrelated; therefore, intervention programs that teach multiple skills that share common determinants will be most successful in the reduction of problematic behaviors (Lemstra et al., 2010). Additionally, comprehensive programs that teach or strengthen multiple psychosocial skills are cost-effective, and can easily be adopted by clinical, school, and community settings (Lemstra et al., 2010).

While these standalone programs have shown success in preventing problematic behaviors that stem from lagging psychosocial skills (Cook et al., 2015; Fixsen, Blase,

Naoom, & Wallace, 2009), it prompted the question of whether a more universal approach, using a program with more broad-spectrum coverage of teaching psychosocial skills, could be more effective (Cook et al., 2015; Domitrovich et al., 2010; Osher & Fleischman, 2005). Cook et al. (2015) reported the need for integrated approaches and programs, as few studies have investigated a comprehensive approach to addressing multiple lagging psychosocial skills at the same time (Reinke, Herman, & Ialongo, 2012).

Lions Quest SFA

Lions Quest SFA was developed as a substance abuse prevention program, and is included on SAMHSA's (2007) National Registry of Evidence-Based Programs and Practices, and is described as an education program based in the school setting for students Grades 6–8 (ages 10–14). Lions Quest SFA focuses on youth development and cultivates social and emotional learning that will help students be successful in school and later in life (SAMHSA, 2007). According to SAMHSA, social cognitive approaches are used within the program to help students develop the following skills: good citizenship skills, strong positive character, skills and attitudes consistent with a drug-free lifestyle, and an ethic of service to others.

According to SAMHSA (2007), Lions Quest SFA targets mental health promotion and substance abuse prevention. The program's emphasis on mental health and group format for delivery has made it a convenient option for mental health providers who need an evidence-based curriculum for group therapy sessions (SAMHSA, 2007). Lions Quest SFA is presented in a group session format and includes social-cognitive approaches (role-playing, peer teaching, adult modeling) to enhance social and emotional

competencies in adolescent students. The program's service delivery is flexible, as the sessions may be adapted to a variety of differing formats based on time constraints (SAMHSA, 2007).

Though a prevention program, Lions Quest SFA's emphasis on increasing self-efficacy has been correlated with decreases in adolescents who are already abusing substances (Eisen, Zellman, & Murray, 2003; U.S. Department of Education, 2006). Furthermore, its alignment with common cognitive behavioral techniques (McLeod, 2010) warranted the exploration of its intervention efficacy in regards to teaching other psychosocial skills. The specific application of Lions Quest SFA examined in this study was used with adolescents in a school-based mental health program to improve problematic behaviors that manifested in the classroom.

Summary

Adolescence is a developmental phase defined by impulsive decision-making, maladaptive emotion regulation, and social difficulties that often result in harmful experiences and long-term consequences (Archambault et al., 2009; Nielsen et al., 2011). There are negative short- and long-term outcomes (school dropout, incarceration, and adult unemployment) for both male and female adolescents with psychosocial problems who do not receive effective interventions (Archambault et al., 2009; Nielsen et al., 2011). Therefore, schools have been tasked with providing programs that teach the necessary competencies to succeed emotionally and socially, in addition to academically (Adelman & Taylor, 2006; Cook et al., 2015; Wagner, Newman, Cameto, & Levine, 2006). Psychosocial theory explained the developmental process of psychosocial skills

and emphasized that it is possible to teach lagging skills (Erikson, 1950, 1963; Ro & Clark, 2013). Addressing important psychosocial skills facilitates an alignment with healthy behaviors and helps to promote a healthy and productive adulthood (McNeely & Blanchard, 2009).

The three identified skills that have received considerable attention in the literature are impulse control, emotion regulation, and social skills. Recent empirical evidence found that youth development interventions can lead to positive emotional and behavioral outcomes (Birkhead, Riser, Mesler, 2009). The focus of this study was on Lions Quest SFA, which began as a substance abuse prevention program. As such, most of the research on this program focused on the prevention efforts of substance abuse behaviors (Eisen, Zellman, & Murray, 2003; U.S. Department of Education, 2006). In the next chapter, I will present the methods of this study for examining the extent to which adolescents improved in lagging psychosocial skills during their participation in Lions Quest SFA.

Chapter 3: Research Method

Introduction

The purpose of this quantitative study was to examine the effect of the Lions Quest SFA program on the development of lagging psychosocial skills, as measured by the combined assessment score on the ALSUP checklist. In addition, I also examined the role of gender to see if there were differences in psychosocial skill development between young women and men. The secondary data used in this study was retrieved from Horizon Behavioral Health's archives and contained the pre- and posttest ALSUP scores and gender of students from two central Virginia schools, who participated in the Lions Quest program in the 2013–2014 school year.

This chapter will include an explanation of this study's research design, methodology, threats to validity, and ethical considerations. I will also provide a rationale for the design chosen to address the research questions of the study. In Chapter 3, I will also present information regarding the secondary data collection and analysis process along with a description of the precautions that were taken to adhere to both ethical standards and confidentiality.

Research Design and Rationale

In this study, I used a correlational design to assess change resulting from participation in the Lions Quest SFA program. The independent variables were time and gender; specifically, one school year starting in August, when the pretest was completed, and ending in June, when the posttest was completed. The ALSUP score recorded before intervention was the covariate, and gender was the grouping variable. The dependent

variable was the ALSUP score recorded after intervention, which was the single measure assessment score of lagging psychosocial skills including a combination of impulse control, emotion regulation, and positive social skills. The design and analytic choices for this study were consistent with research designs that have two independent variables and seek to identify possible changes and relationships between variables over time. There were no noted time or resource constraints for this study.

Methodology

Population

The target population of this study was middle school students who received school-based services through Horizon Behavioral Health in the 2013–2014 school year. The estimated size of the target population was approximately 300 adolescents. The accessible population was 66 adolescents, as the data from only two central Virginia middle schools were accessible.

Sampling and Sampling Procedures

The sampling strategy I used in this study was one of convenience due to the availability of the data. In this specific application of the Lions Quest SFA program, students were referred to the school-based mental health program based on identified emotional or behavioral problems that required support in the classroom setting. The group sessions did not contain more than 10 adolescents and two staff members at any one time and were held once per week during the school day. The program began during the first week of school and continued every week until the last week of school. I used the *a priori* G Power application (Sheperis, 2009) to identify an appropriate sample size with

.80 power for an ANCOVA. The results $n = 55$ for an actual power of .95 and an effect size of 0.5 (Critical $F = 4.07$).

Procedures for Secondary Data Collection

The data were originally collected from adolescents in conjunction with the enrollment and treatment process within Horizon Behavioral Health's school-based mental health services portfolio. Adolescents were referred to the service by the school system, and the secondary data for this study did not contain any names or other identifiable data. The data were collected and stored by qualified mental health professionals employed by Horizon Behavioral Health. As previously stated, I worked for Horizon Behavioral Health at the time of the study; however, I was never present at or involved with any of the programs addressed in this study. A letter to the chief executive officer of Horizon Behavioral Health was submitted requesting permission to access the secondary data (See Appendix A). His approval granted permission to access and analyze the secondary data required for this study. Following Walden University's Institutional Review Board's (IRB) approval, I obtained the secondary data set from Horizon Behavioral Health's privacy officer via e-mail and attached file (Walden IRB approval no. 06-15-16-0352112). Pre- and posttest ALSUP scores were only collected based on one school year's participation in the Lions Quest SFA program; the secondary data set only included pretest scores completed in August 2013 and posttest scores completed in June 2014.

Instrumentation

The ALSUP checklist was developed by Dr. Greene in 2008 and is a questionnaire battery that allows mental health professionals to rank items assessing lagging skills on a 4-point scale to measure the frequency each of the behaviors occurs. (Greene, 2008). The original instrument contained four areas: lagging skills, unsolved problems-school, unsolved problems-home, and unsolved problems-other (Greene, 2008). However, only the 24 items assessing lagging skills were collected as the secondary data used in this study. These items were added together to create an overall score. The ALSUP's original intent was to help parents, educators, and mental health providers assess lagging skills in order to target an intervention for an individual child; however, it has not been used as a tool to measure change over time, and therefore, the measurement validity was interpreted cautiously. I contacted Dr. Greene to discuss the availability of psychometric data, and Dr. Greene reported that he did not have any psychometric information on the ALSUP (R. Greene, personal communication, April 9, 2016).

The construct validity of this study was weak due to the lack of identifiable subscales and my inability to psychometrically examine interitem correlations. However, I critically examined ALSUP items against psychometrically valid constructs in the literature and suggested that this measure had some face validity for these three identified psychosocial skills. Impulse control was defined as having competence in the areas of future-oriented planning, decision-making, and focus, and a priority of long-term consequences over short-term rewards (Berg et al., 2015; Block, 1995). The ALSUP included questions that examined an adolescent's abilities for logical sequence,

maintaining focus, and considering outcomes when making decisions (Greene, 2008). Research highlighted emotion regulation as the ability to moderate or control one's emotional experience (Gross, 2002; Watford & Stafford, 2015), and the ALSUP included questions that gauge an individual's ability to manage their emotional response and assess for cognitive distortions, biases, and chronic irritability (Greene, 2008). Lastly, the ability to process social information and engage in appropriate social behaviors is an indicator of an individual's level of social skills (Fraser et al., 2005), and the ALSUP included questions regarding the adolescent's ability to interpret social cues and display basic social skills (Greene, 2008).

The ALSUP is in the public domain. Nevertheless, I contacted Dr. Greene and received his permission to reproduce it in this study (R. Greene, personal communication, February 25, 2016). Appendix B contains a copy of the instrument.

Data Analysis

I used an ANCOVA in SPSS to address the research questions, as in this study I analyzed pre- and posttest ALSUP scores to identify whether participation in the Lions Quest SFA program improved lagging psychosocial skills, defined as the combination of impulse control, emotion regulation, and social skills, and whether gender was a variable of change. An alpha level of .05 was used to identify whether a significant change occurred in the ALSUP scores, along with gender differences. This study addressed the following two specific research questions:

Research Question 1: Does participation in the Lions Quest SFA program improve lagging psychosocial skills defined as the combination of impulse

control, emotion regulation, and positive social skills, as measured by the pre- and posttest scores of the ALSUP checklist?

H₀1: Participation in the Lions Quest SFA program does not improve lagging psychosocial skills defined as the combination of impulse control, emotion regulation, and positive social skills, as measured by the pre- and posttest scores of the ALSUP checklist.

H_A1: Participation in the Lions Quest SFA program does improve lagging psychosocial skills defined as the combination of impulse control, emotion regulation, and positive social skills, as measured by the pre- and posttest scores of the ALSUP checklist.

Research Question 2: Does gender affect the improvement of lagging psychosocial skills defined as the combination of impulse control, emotion regulation, and positive social skills, as measured by the pre- and posttest scores of the ALSUP checklist?

H₀2: There is no difference in the improvement of lagging psychosocial skills defined as the combination of impulse control, emotion regulation, and positive social skills, as measured by the pre- and posttest scores of the ALSUP checklist between males and females.

H_A2: There is a difference in the improvement of lagging psychosocial skills defined as the combination of impulse control, emotion regulation, and positive social skills, as measured by the pre- and posttest scores of the ALSUP checklist between males and females.

Threats to Validity

In this study, I used secondary data that was collected by qualified mental health professionals. It was presupposed that the observation and assessment skills of these professionals were accurate and that veritable and meaningful data were collected and submitted. As mentioned, differences in service delivery by the mental health professionals could have existed and could have impacted an adolescent's willingness to participate in the Lions Quest SFA program, or the detail of content covered in each group session, which may have indirectly influenced their pre- and posttest ALSUP scores.

The main threat to both the external and internal validity in this research study was that the secondary data set was based on ALSUP scores from adolescents who most likely received alternative mental health services, in addition to the group sessions using the Lions Quest SFA program. As stated, this study had two prominent limitations: convenience of the data set (posing threats to both internal and external validity) and the limitations of the ALSUP as the assessment tool (construct validity). There were two concerns that threatened the construct validity of the measurement tool. The ALSUP was used to identify improvements in psychosocial skills that included well-known concepts of impulse control, emotion regulation, and positive social skills. However, the score was a combination of these skills, as the ALSUP does not provide sub scores for any of these concepts. Therefore, it was not possible to determine (a) if these dimensions were actually relevant to change and (b) the relative importance of each of the dimensions.

Although the ALSUP checklist has face validity, measurement validity and reliability have not been tested or documented.

This research study had three additional threats to internal validity, as the study did not have a control group, so I did not have control over the conditions of data collection, and there was no manipulated independent variable. The absence of these attributes means the researcher could not minimize the effects of potentially confounding variables (Creswell, 2009; Frankfort-Nachmias & Nachmias, 2008). Lastly, the study had a serious limitation for generalizability since it was not a random sample; therefore, the findings should not be generalized to the larger population. However, the secondary data came from a real-world setting, and this strengthened the ecological validity of the study (Creswell, 2009).

Ethical Considerations

I followed all ethical standards and limits and adhered to the IRB guidelines for informed consent and confidentiality. The secondary data did not include any identifiable information such as names, addresses, or Social Security numbers, and all data were de-identified by the privacy officer at Horizon Behavioral Health prior to the study. Horizon Behavioral Health granted me the necessary permission to utilize the secondary data (see Appendix A), and approval from Walden University's IRB preceded all my data collection efforts. Horizon Behavioral Health will have access to the research results and will be presented with the findings at completion of the study. As already noted, I worked for Horizon Behavioral Health at the time of this study; however, all secondary data obtained were de-identified prior to me receiving it to ensure complete confidentiality. I

will delete the Microsoft Excel spreadsheet containing all of the secondary data at the conclusion of the study.

Summary

I chose this design using secondary data due to the analysis of pre- and posttest data to identify whether lagging psychosocial skills, defined as the combination of impulse control, emotion regulation, and positive social skills, improved as a result of participation in the Lion Quest SFA program. Additionally, I examined the role of gender to assess whether it was a variable of change. An ANCOVA was used to analyze the secondary dataset. In the next chapter, I will discuss the data collection process and statistical results.

Chapter 4: Results

Introduction

Lions Quest SFA focuses on youth development and cultivates social and emotional learning that helps students be successful in school and later in life (SAMHSA, 2007). Though a substance abuse prevention program, Lions Quest SFA emphasizes increasing self-efficacy (Eisen, Zellman, & Murray, 2003; U.S. Department of Education, 2006), and its inclusion of common cognitive behavioral techniques (McLeod, 2010) warranted the exploration of its intervention efficacy in regards to teaching other psychosocial skills. The purpose of this quantitative study was to examine the effect of the Lions Quest SFA program on the development of lagging psychosocial skills, which included impulse control, emotion regulation, and positive social skills, and to determine if there were gender differences in psychosocial skills development. The research questions and hypotheses for the study were as follows:

Research Question 1: Does participation in the Lions Quest SFA program improve lagging psychosocial skills defined as the combination of impulse control, emotion regulation, and positive social skills, as measured by the pre- and posttest scores of the ALSUP checklist?

H_01 : Participation in the Lions Quest SFA program does not improve lagging psychosocial skills defined as the combination of impulse control, emotion regulation, and positive social skills, as measured by the pre- and posttest scores of the ALSUP checklist.

H_A1: Participation in the Lions Quest SFA program does improve lagging psychosocial skills defined as the combination of impulse control, emotion regulation, and positive social skills, as measured by the pre- and posttest scores of the ALSUP checklist.

Research Question 2: Does gender affect the improvement of lagging psychosocial skills defined as the combination of impulse control, emotion regulation, and positive social skills, as measured by the pre- and posttest scores of the ALSUP checklist?

H₀2: There is no difference in the improvement of lagging psychosocial skills defined as the combination of impulse control, emotion regulation, and positive social skills, as measured by the pre- and posttest scores of the ALSUP checklist between males and females.

H_A2: There is a difference in the improvement of lagging psychosocial skills defined as the combination of impulse control, emotion regulation, and positive social skills, as measured by the pre- and posttest scores of the ALSUP checklist between males and females.

This chapter will include an overview of the data collection process, a review of the research questions and hypotheses testing, the results of the data analyses, and a summary of the findings.

Data Collection

The data for this study were collected in 1 day. I e-mailed the privacy officer at Horizon Behavioral Health requesting access to the de-identified secondary dataset and

attached copies of the Letter of Cooperation and Data Use Agreement signed by the CEO of the company. The privacy officer e-mailed me the dataset as an attached file. The file contained the de-identified data for 66 adolescents who participated in the Lions Quest SFA program in the 2013–2014 school year. It is not known if the program was administered as planned, nor if there were any unusual or adverse consequences that occurred while the data were being collected.

Results

Descriptive Statistics

The target population of this study was middle school students who received school-based services through Horizon Behavioral Health in the 2013–2014 school year. The estimated size of the target population was approximately 300 adolescents; however, the accessible population was 66 adolescents, as the data from only two central Virginia middle schools were accessible. The secondary data set contained pre- and posttest scores from 30 female students and 36 male students.

Descriptive statistics for the pre- and posttest ALSUP scores are noted in Table 1, and the results of the Kolmogorov-Smirnov and Shapiro-Wilk tests suggested that both the pretest ALSUP scores ($p = .200$; $p = .691$) and posttest ALSUP scores ($p = .200$; $p = .399$) were normally distributed. There was a positive correlation between the two variables, $r = .804$, $n = 66$, $p < 0.001$. In addition, ALSUP score differences by gender are outlined in Table 2.

Table 1

Pre- and Posttest ALSUP Scores

	Pretest ALSUP Score	Posttest ALSUP Score
Minimum	10	8
Maximum	96	84
<i>M</i>	59.89	53.05
<i>SD</i>	19.41	16.59
Skewness	-.214	-.154
Kurtosis	-.252	-.157

Table 2

ALSUP Score Differences by Gender

ALSUP Score Differences by Gender (<i>n</i> = 66)	Pretest ALSUP Score	Posttest ALSUP Score
Male	<i>M</i> = 63.39 (<i>SD</i> = 17.82)	<i>M</i> = 55.03 (<i>SD</i> = 14.54)
Female	<i>M</i> = 55.70 (<i>SD</i> = 20.69)	<i>M</i> = 50.67 (<i>SD</i> = 18.75)
Total	<i>M</i> = 59.89 (<i>SD</i> = 19.41)	<i>M</i> = 53.05 (<i>SD</i> = 16.59)

Research Questions Results

I conducted an ANCOVA to determine whether a statistical relationship existed between the pre- and posttest ALSUP scores, and to identify whether gender was a variable of change. Statistical significance was determined at $\alpha = .05$. To answer the first research question, I conducted a paired samples *t*-test to compare the pre- and posttest scores for the entire group. On average, pretest scores ($M = 59.89$, $SE = 2.32$) were higher than posttest scores ($M = 53.05$, $SE = 1.99$). The difference, 6.85, BCa 95% CI [4.0, 9.7], was significant $t(65) = 4.8$, $p < 0.001$, and represented a small to medium-sized effect, $d = 0.35$, as outlined in Table 2. These results indicated that ALSUP scores were

significantly reduced from before to after the program and the null hypothesis could be rejected.

For the second research question, I conducted an ANCOVA using the ALSUP pretest as the covariate, and gender as the grouping variable. As shown in Table 4, there was no significant effect of gender on the posttest ALSUP score after controlling for the effect of the pretest ALSUP score, $F(2, 63) = 0.15, p = 0.705$. Although gender differences were not found in the posttests, I used a one-way ANOVA to determine whether there were gender differences in the pretests; however, no significant differences were found in the pretest scores either, $F(1, 64) = 2.63, p = 0.11$. The null hypothesis for the second research question could not be rejected, suggesting that there was no difference in the improvement of lagging psychosocial skills, defined as the combination of impulse control, emotion regulation, and positive social skills, between males and females.

Table 3

ANCOVA Summary

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	Partial Eta
Corrected Model	11583	2	5791.69	.647
Intercept	815.42	1	815.42	.114
Pretest	11272.2	1	11272.2	.641
Gender	14.51	1	14.51	.002

Summary

The results of this research study indicated that the ALSUP scores were significantly reduced from before to after the program, suggesting that participation in the Lions Quest SFA program may have contributed to the improvement of lagging

psychosocial skills, defined as the combination of impulse control, emotion regulation, and positive social skills. However, gender was not found to be a variable of change in this study. In the final chapter, I will discuss the findings in greater detail, including the limitations of the study, and then conclude with recommendations and implications for future research based on the overall findings of this study.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The mental and behavioral health of children and adolescents is a national concern, and schools are being tasked with ensuring that their students have the academic, behavioral, and emotional support that they need (Gibbons et al., 2012). The purpose of this quantitative study was to identify whether the Lions Quest SFA program contributed to developing lagging psychosocial skills in adolescents, including impulse control, emotion regulation, and positive social skills. Additionally, I examined the role of gender to identify whether it affected the improvement in lagging psychosocial skills while participating in the Lions Quest SFA program. The results of this study found that ALSUP scores reduced from pretest to posttest, suggesting that participation in the Lions Quest SFA program may have contributed to improving lagging psychosocial skills. Gender was not found to be a variable of change in this study.

Interpretation of the Findings

The findings of this research study align with Erikson's (1950, 1963) psychosocial theory of child development and other research studies (Harrell et al., 2009; Lemstra et al., 2010; Oklan & Henderson, 2014; Reyna & Mills, 2014) regarding the importance of teaching psychosocial skills. However, the lack of gender difference found in this study warrants further study and discussion. King et al. (2011) and Walters (2014) found gender differences in impulsivity in that males tended to have more self-control and attention problems than females, and Oldehinkel et al. (2007) found that females were more sensitive to social issues than males. The lack of subscores for impulse

control, emotion regulation, and social skills on the ALSUP, in addition to the lack of a control group, make it difficult to compare this study's findings regarding gender differences with existing studies that contain more specific findings.

Additionally, as noted in previous chapters, my review of school-based literature revealed a common element with many existing programs in that they only addressed one specific behavioral problem or lagging psychosocial skill and lacked the diversity to comprehensively address multiple behaviors or skills (Cook et al., 2015; Rones & Hoagwood, 2000). While these standalone programs have shown success in preventing problematic behaviors that stem from lagging psychosocial skills (Cook et al., 2015; Fixsen et al., 2009), the question of whether a more universal approach, using a program with more broad-spectrum coverage of teaching psychosocial skills, remained relatively unexplored (Cook et al., 2015; Domitrovich et al., 2010; Osher & Fleischman, 2005). Moreover, Cook et al. (2015) reported the need for integrated approaches and programs, as few studies have investigated a comprehensive approach to addressing multiple lagging psychosocial skills at the same time (Reinke et al., 2012). The findings of this research study extended the knowledge in this area by identifying Lions Quest SFA, which began as a substance abuse prevention program, as a potentially effective program for teaching lagging psychosocial skills to adolescents.

Limitations of the Study

The weakness of the ALSUP tool, as used in this study, contributed to two construct validity concerns. The first concern referred to the applicability of the tool to address aggregate change over time. The original intent of the ALSUP was to help

parents, educators, and mental health providers assess lagging skills in order to target an intervention for an individual child, and not to specifically measure change over time; therefore, the measurement validity must be interpreted cautiously (Creswell, 2009).

The second concern about construct validity of the ALSUP was my inability to psychometrically examine interitem correlations of the individual subscales. The ALSUP measured a combination score of impulse control, emotion regulation, and social skills, and the dataset did not provide subscores for any of these dimensions. Therefore, it was not possible to determine (a) if these dimensions were internally consistent and psychometrically unique and (b) the relative importance of each of the dimensions.

This research study had three additional threats to internal validity, as the study did not have a control group, I did not have control over the conditions of data collection, and there was no manipulated independent variable. The absence of these attributes meant that I could not minimize the effects of potentially confounding variables. As such, it should not be assumed that the improvements made in psychosocial skills are entirely due to the students' participation in the Lions Quest SFA program.

Regarding external validity limitations, this data set was selected for its convenience to me. Further, the cases were not randomly sampled from the population of students attending Lions Quest SFA programs. Thus, caution is warranted regarding the appropriateness of generalizing these findings to the population of students who attend these kinds of programs.

Recommendations

The findings of this study suggested that more comprehensive programs that teach multiple skills at one time could be effective in the school setting; however, there are several recommendations for further research stemming from the limitations identified in this study. I recommend that future studies use a more valid and reliable instrument to measure changes in psychosocial skills. Moreover, future instruments should include subscales for each skill being examined to identify the importance of each dimension and whether they are relevant to change. I also suggest that the ALSUP be examined for its potential as an assessment to measure change over time for aggregate analyses, in addition to its function as an individual assessment tool.

A second recommendation for future studies is to include a control group, which would be beneficial in minimizing potentially confounding variables. Specifically, the inclusion of a control group would allow the researcher to control the effects of maturity in adolescents as they develop throughout the school year. Moreover, using a random sample and excluding adolescents that received additional mental health interventions to the Lions Quest SFA program would allow the researcher to more accurately evaluate the efficacy of the program.

Although gender was not a variable of change in this study, another recommendation would be to use age or grade level as covariates for future study. This study included adolescents in middle school, but the secondary dataset did not capture a specific age or grade level; therefore, possible differences between each age or grade level could not be analyzed. Lastly, a final recommendation would be for a longitudinal

study to follow adolescents for up to a year after their participation in the program to identify if their progress is being sustained over time.

Implications

Psychosocial skills are imperative to healthy adolescent development, and theory and research indicate that improvement of psychosocial skills increases their ability to navigate the challenges and transitions of adolescence (Birkhead et al., 2009; McNeely & Blanchard, 2009). The results of this study indicated that the ALSUP scores were significantly reduced from before to after the Lions Quest SFA program, suggesting that participation in the program may have contributed to the improvement of lagging psychosocial skills. Despite the limitations identified, the results of this study have added a small piece of evidentiary support to contribute to the body of knowledge in psychosocial skill development.

I intend to present the study's findings to the CEO and Board of Directors for Horizon Behavioral Health, along with a local presentation to central Virginia school administrators who may have students that could benefit from this program. In addition to describing the study results, I will highlight the limitation of the instrument for further research and suggest ways of collecting data and examining the psychometric properties of the ALSUP to demonstrate measurement validity. This could provide additional insight into the benefits of the Lions Quest SFA program as a treatment intervention for lagging psychosocial skills.

Conclusion

Adolescence is a developmental phase defined by impulsive decision-making, maladaptive emotion regulation, and social difficulties that often result in harmful experiences and long-term consequences (Archambault et al., 2009; Nielsen et al., 2011). Schools have been tasked with providing programs that teach the necessary competencies to succeed emotionally and socially, in addition to academically (Adelman & Taylor, 2006; Cook et al., 2015; Wagner et al., 2006). Positive youth development interventions have been found to prevent risky behaviors in adolescents (U.S. Department of Health and Human Services, 2013) and have been linked to positive emotional and behavioral outcomes (Birkhead et al., 2009; McNeely & Blanchard, 2009). Although most of the research on Lions Quest SFA has focused on prevention efforts for substance abuse behaviors (Eisen et al., 2003; U.S. Department of Education, 2006), the results of this small sample, secondary research effort suggest that this program may contribute to improving lagging psychosocial skills. Although further study is recommended due to the limitations of this study, it is a step closer in addressing the need for comprehensive interventions that provide more broad-spectrum coverage for multiple problematic behaviors at the same time.

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Appendix A: Letter of Cooperation from Horizon Behavioral Health

05/01/2016

Dear Jennifer Switzer,

Based on my review of your research proposal, I give permission for you to conduct the study entitled Evaluation of the Intervention Efficacy of Lions Quest Skills for Adolescence. As part of this study, I authorize you to use secondary data from outcome results with the names of participants being anonymous for purposes of the study.

We understand that our organization's responsibilities include access to secondary data being used to measure the efficacy of the Lions Quest Skills for Adolescence program in improving lagging psychosocial skills in adolescence. We reserve the right to withdraw from the study at any time if our circumstances change. I confirm that I am authorized to approve research in this setting.

I understand that the data collected will remain entirely confidential, and may not be provided to anyone outside of the research team without permission from the Walden University IRB.

Best Regards,

Damien Cabezas

Chief Executive Officer, Horizon Behavioral Health

Horizon Behavioral Health

Appendix B: ALSUP Checklist

Child's Name _____ Date _____ Person Completing Form _____

	Never	Sometimes	Often	Always
1. Difficulty handling transitions, shifting from one mindset or task to another	0	1	2	3
2. Difficulty doing things in a logical sequence or prescribed order	0	1	2	3
3. Difficulty persisting on challenging or tedious tasks	0	1	2	3
4. Poor sense of time	0	1	2	3
5. Difficulty reflecting on multiple thoughts or ideas simultaneously	0	1	2	3
6. Difficulty maintaining focus	0	1	2	3
7. Difficulty considering the likely outcomes or consequences of actions	0	1	2	3
8. Difficulty considering a range of solutions to a problem	0	1	2	3
9. Difficulty expressing concerns, needs, or thoughts in words	0	1	2	3
10. Difficulty understanding what is being said	0	1	2	3
11. Difficulty managing emotional response to frustration so as to think rationally	0	1	2	3
12. Chronic irritability and/or anxiety significantly impede capacity for problem-solving or heighten frustration	0	1	2	3
13. Difficulty seeing the "grays"/concrete, literal, black-and-white, thinking	0	1	2	3
14. Difficulty deviating from rules, routine	0	1	2	3
15. Difficulty handling unpredictability, ambiguity, uncertainty, novelty	0	1	2	3
16. Difficulty shifting from original idea, plan, or solution	0	1	2	3
17. Difficulty taking into account situational factors that would suggest the need to adjust a plan of action	0	1	2	3
18. Inflexible, inaccurate interpretations/cognitive distortions or biases (e.g., "Everyone's out to get me," "Nobody likes me," "You always blame me," "It's not fair," "I'm stupid")	0	1	2	3
19. Difficulty attending to or accurately	0	1	2	3

interpreting social cues/poor perception of social nuances				
20. Difficulty starting conversations, entering groups, connecting with people/lacking other basic social skills	0	1	2	3
21. Difficulty seeking attention in appropriate ways	0	1	2	3
22. Difficulty appreciating how his/her behavior is affecting other people	0	1	2	3
23. Difficulty empathizing with others, appreciating another person's perspective or point of view	0	1	2	3
24. Difficulty appreciating how he/she is coming across or being perceived by others	0	1	2	3