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Development of the Self-Advocacy Measure for Youth: Initial Validation Study with Caregivers of Elementary Students with Attention-Deficit/ Hyperactivity Disorder

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Development of the Self-Advocacy Measure for Youth:

Initial Validation Study with Caregivers of Elementary Students with Attention-Deficit/Hyperactivity Disorder

by

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of the requirements for the degree of
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DEDICATION

This dissertation is dedicated to several people I hold close to my heart. First, to my dad, James F. Adams, who taught me what it means to persevere and pursue my dreams despite the challenges that try to get in the way. Without his model of pursuing his dream of higher education, I would not be where I am today. Second, to my sister, Kimberly K. Tower, who lifted me up and gave me strength to persevere and remain true to myself no matter what. She will forever inspire me to be strong and thankful. Finally, I dedicate this manuscript to my nephew, Zachary J. Tower. I hope he will be inspired to find strength in life's trials and persevere to achieve all that he is capable of achieving.

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ABSTRACT

Self-advocacy for persons with disabilities involves demonstrating knowledge of oneself and knowledge of rights afforded to individuals with disabilities through one's communication with others and leadership skills. These self-advocacy skills are significantly associated with positive outcomes after high school for students with a range of disabilities. However, knowledge of elementary students' self-advocacy skills is limited. One reason for this lack of evidence is that a psychometrically sound instrument designed to measure the cumulative skills within the self-advocacy construct did not exist. The purpose of the current study was to create a measure of self-advocacy skills that can be used with elementary students identified as having ADHD: the Self-Advocacy Measure for Youth (SAMY). Seventy-six parents/caregivers of elementary school youth identified as having ADHD and an IEP or Section 504 plan were included in the preliminary validation study. Analyses of their responses provided initial support that the items included in the SAMY fit the theoretical construct of self-advocacy as no items were indicated for removal or modification. Strong internal consistency was indicated for the Total Scale ($\alpha = .93$) and subscales (Knowledge of Self, Knowledge of Rights, Communication and Leadership Skills $\alpha = .87, .87, .79$, and .84 respectively), and test-retest analyses based on 20% of respondents ($n = 14$) provided evidence for the reliability of the interpretation of Total Scale ($r = .865$, $p < .01$) and subscale scores across one month of time. The theoretical framework, principal components analysis, and parallel

analysis supported four-, six-, and two-factor measurement models, respectively, indicating the need for additional research prior to determining the most appropriate model for interpreting the SAMY scores for youth identified as having ADHD. A moderate correlation (r = .47, p < .01) between overall scores on the SAMY and on the American Institutes for Research Self-Determination Scale (AIR) provided evidence of discriminant validity. An independent t-test indicated no significant difference in the Total Scale scores for students with an IEP (M = 49.66, SD = 19.75) compared to students with a Section 504 Plan (M = 52.54, SD = 16.52); t(74)=0.68, p = .50); similar analyses performed for each subscale revealed no significant differences. A statistically significant difference existed between the Total Scale scores for students in grades K-2 (n = 23; M = 41.57; SD = 14.30) compared to students in grades 3-5 (n = 53; M = 55.08; SD = 18.41; t(74)= -3.13, p = .003) based on independent t-tests. The Pearson correlation coefficient revealed a significant, moderate correlation between school level and SAMY Total Score, r =.34, p < .01. This positive correlation between overall self-advocacy skills and elementary school level supported the theoretical progression of self-advocacy skill growth mirroring overall development. Implications for school psychologists and suggestions for future research are discussed.

CHAPTER ONE

Introduction

Statement of the Problem

Federal legislation requires secondary students in special education to be included in making decisions about their educational and career goals as a means for students to self-advocate (IDEA, 1997; IDEA, 2004). Self-advocacy rights for students with disabilities served by the Americans with Disabilities Act, such as students with Attention-Deficit/Hyperactivity Disorder (ADHD) who have a 504 Plan, are not as clearly mandated (ADA, 2008) despite research consistently indicating strong positive correlations between self-advocacy skills and positive outcomes after high school for students with disabilities irrespective of their program of services (Jameson, 2007; Johnson, 1999; Malian & Nevin, 2002; Wehmeyer & Palmer, 2003). These self-advocacy skills include knowledge of oneself, knowledge of rights afforded to individuals with disabilities, communicating this knowledge to others, and exhibiting relevant leadership skills. Some of the positive outcomes associated with individuals who demonstrate more self-advocacy skills include higher rates of employment, financial independence, independent living, and post-secondary school educational achievement compared to those who have or engage in fewer self-advocacy skills. Educators and researchers agree that it is crucial for all students with disabilities to become successful self-advocates in order to reach their educational and life goals. Even with the right and the need to self-advocate, research has demonstrated that students with disabilities are

typically inadequately prepared to participate in developing their educational plans and to self-advocate (Spoulos, 2006; Williams & O'Leary, 2001).

Educators and researchers have responded by developing numerous interventions to teach secondary and post-secondary students how to engage in self-advocacy skills; however, the need to develop self-advocacy skills throughout students' schooling, rather than waiting until secondary school, is apparent (Test, Fowler, Brewer, & Wood, 2005). Despite this need, existing research regarding teaching self-advocacy skills to middle and elementary school students with disabilities is limited. No information regarding the level of self-advocacy skills in elementary children with disabilities was available prior to the current study. Only one study has previously examined self-advocacy skills in children with ADHD receiving special education services (Shimpi, 2004); no studies prior to this study have examined self-advocacy skills in youth with 504 Plans.

One vital reason for the lack of information regarding self-advocacy skills development at the elementary school level is that no appropriate measure to assess the overall construct of self-advocacy for these younger students existed. Therefore, the ability to measure the effectiveness of interventions aimed to increase students' self-advocacy skills in elementary school students has been limited.

Students with ADHD

Students with a particular need for self-advocacy skills are those identified as having ADHD. Students with ADHD experience significant functional impairments, including academic underachievement and lower scores on reading and math achievement tests compared to non-ADHD peers (Loe & Feldman, 2007). Youth who exhibit significant hyperactive symptoms are three times more likely to be retained in a

grade and are significantly more likely to drop out of high school (Barkley, Fischer, Smallish, & Fletcher, 2006). Longitudinal studies demonstrate that impairments experienced by individuals with ADHD are persistent. According to an analysis of these studies by Loe and Feldman (2007), 50% of students with ADHD continue to demonstrate impairments in learning, challenges applying knowledge, and inadequate social skills into adulthood. Another 25% of youth with ADHD will develop more severe problems as adults, such as additional psychiatric disorders. Students with ADHD have lower rates of attending and graduating from college than their non-ADHD peers. Youth with significantly higher levels of hyperactivity have higher rates of unemployment, are two times more likely to be fired from a job, and are significantly more likely engage in substance abuse (Barkley et al., 2006). Given the impairments and negative outcomes associated with having ADHD, these youth are in need of developing self-advocacy skills that will increase their resiliency and improve long-term educational and quality of life outcomes.

Self-Advocacy

Definition. Self-advocacy was first described in the literature in relation to people with disabilities in 1977 (Test, Fowler, Wood, Brewer, & Eddy, 2005). This initial utilization of the concept of self-advocacy referred to the movement to obtain rights for people with disabilities. The term self-advocacy has since evolved and been defined numerous ways. Test, Fowler, Wood, and colleagues (2005) found that present views by researchers, theorists, and educators commonly delineate self-advocacy as a broad construct including several skills that a person with disabilities needs to develop in order to achieve his or her personal goals. For the purposes of the current study, self-advocacy

is defined as a broad skill set including four key elements: knowledge of self, knowledge of rights, communication skills, and leadership skills. This definition is based on the conceptual framework of self-advocacy for students with disabilities proposed by Test, Fowler, Wood, and colleagues (2005). Progression of one's ability to self-advocate is expected to both follow and be impacted by the typical sequence of human cognitive, social, emotional, and language skill development. Typically during or shortly after their Kindergarten school year, children are delving into a period of development during which skills emerge that are necessary for self-advocacy to begin. This age is referred to as the beginning of middle childhood and is widely considered to be an age of substantial growth across developmental domains. Basic cognitive reasoning skills begin to appear and evolve to abstract thinking over the subsequent elementary school years, perspective taking advances from egocentric to reciprocal, drive for autonomy and sense of self increase, and communication skills expand to allow for higher levels of negotiation to successfully occur to (Eccles, 1999; Walker, 1980).

The conceptual framework of self-advocacy recognizes knowledge of self and knowledge of rights as the foundational skills involved in self-advocacy. Knowledge of self includes understanding one's own strengths, interests, preferences, goals, aspirations, best modes of learning, characteristics of the disability pertinent to the individual, necessary environmental supports, effective accommodations, and one's personal responsibilities related to reaching for one's dreams and potential. Simultaneously, students should develop an understanding of one's rights related to their disability and how to access these rights. For example, children may have a support plan and receive accommodations related to their disability. Knowledge of this plan and the

accommodations within their plan, participating in its development, and negotiating the details of the plan are skills included in this subconstruct of self-advocacy. Human development allows for these self-advocacy skills to begin and progress during the elementary school years.

Between preschool and Kindergarten, children develop the cognitive ability to sort and classify by one characteristic, such as sorting peers by gender or grade level (Walker, 1980). Thus, children entering middle childhood would be able to label themselves as having or not having a specific disability or disorder (e.g., "I have diabetes" or "I have ADHD"). However, a child's initial perspective of this classification is that everyone with diabetes or ADHD is the same and feels exactly the way he or she feels. Cognitive skills continue to evolve that allow children to describe groups with more detail. Similarly, children develop the ability to compare themselves to others in order to identify relative strengths and challenges between the ages of 6 and 10 years old (Eccles, 1999). At age 6, children describe their own skills irrespective of the skills of others around them because they are not yet attending to and seeking to compare others' skills. Thus, 6 year olds are beginning to describe their strengths and challenges, but typically without accuracy or solely through parroting of what they have been told. Youth evolve from being able to state they have a support plan to contributing to discussions about what strategies their teachers or they themselves use within the classroom to promote achievement. By age 10, children have developed the ability to incorporate others' skills into their self-assessments (Eccles, 1999). The next stage of development, early adolescence, begins around the age of 10 years for many children and brings about important changes. The growth of abstract thinking over the next several

years enables youth to be able to contemplate hypothetical situations without having to be in the situation and consider multiple views of a problem simultaneously. Thus, these increased cognitive skills would allow for increased knowledge of self and knowledge of rights self-advocacy skills to be obtained.

As students gain an understanding of themselves and their rights, they progress to communicating this knowledge with others in appropriate ways. Self-advocacy communication skills involve the ability to articulate all of the knowledge gained in a manner that is persuasive and appropriately assertive. Communication incorporates listening and the ability to compromise or negotiate as needed. As higher levels of cognitive development unfold, social perspective-taking skills mature and youth are able to communicate and negotiate more effectively. During the preschool years, children begin to shift from a completely egocentric perspective of self and others to decentration, or greater conceptual awareness of others' perspectives (Selman, 1971). Children initially believe that others see and think only the same way he or she is thinking. Next, children begin to understanding that others can have a different perspective, but they are not yet able to hypothesize what that perspective could be. Subsequently, children progress to be able to make a basic hypothesis about another person's perspective by putting themselves in that role and assuming the other person would come to the same conclusion as oneself from that viewpoint. Finally, toward the end of early childhood youth develop the ability to understand that other people have different experiences or personality factors than oneself that are likely factored into their perspectives. This latter level begins to develop at approximately 6 years of age. Middle childhood results in the emergence of reciprocal role-taking, during which time youth learn to consider one's own

perspective and another's perspective simultaneously. These perspective-taking skills are essential to and impact one's ability to explain to others how one's disability (ADHD) impacts people with the disability as a whole in order to be able to negotiate change for the group.

In Kindergarten and early elementary school years, interpersonal negotiation skills are egocentric and limited to strategies in which neither person's view transforms, such as trying to physically or verbally overpower the other, retreating from the interaction, or blind obedience (Gallagher, 1993). By upper elementary, youth are increasingly able to understand another's perspective; however, negotiation continues to be a means to getting one's own way, such as bribing the other person to think as the child does or acquiescing due to the perception that the other person is more socially powerful. As youth transition into middle school years, they begin to incorporate both people's perspectives in order to preserve the relationship. The evolving cognitive ability to see themselves and the situation from others' perspectives enables more adaptive negotiation skills to subsequently develop. Persuasion is a key strategy used to negotiate in early adolescence. These skills continue to advance through the teen years, eventually allowing older youth to see the situation not just from the perspectives of those involved in the negotiation, but from the third-person perspective of how the outcomes will affect the greater whole.

The final subset of skills included in this definition of self-advocacy is leadership skills. Leadership skills include understanding the rights of the whole group with the disability, the roles and dynamics within teams, available resources, and strategies to work within an organization in order to advocate for the rights of others and take civil

action (Test, Fowler, Wood, et al., 2005). The development of leadership self-advocacy skills occurs well after foundational knowledge of self, knowledge of rights, and communication skills develop. Only once a youth has the cognitive and social perspective-taking skills to see multiple perspectives within a group and the reciprocal relationship of their group to the whole, can a youth self-advocate for the group. Thus, self-advocacy leadership skills may begin to develop with the emergence of early adolescence.

Self-advocacy and self-determination. One issue that hinders conducting and interpreting self-advocacy research is the inconsistency with which self-advocacy is theorized to relate to self-determination. The initial movement to help individuals with disabilities gain autonomy provided opportunities for these individuals to develop self-advocacy skills, such as through courses taught at community centers to teach a person with a disability how to apply for a job. Shortly thereafter, the broader conceptualization of self-determination theory fueled further empowerment of individuals with disabilities to obtain skills necessary to achieve their goals. These skills and attitudes that individuals with disabilities use to determine and achieve personal goals are collectively referred to as self-determination (Ward & Meyer, 1999). Some conceptualizations of self-determination fully encompass the construct of self-advocacy, while others only provide for partial commonality between the two constructs. How much weight or importance self-advocacy has within the overall construct of self-determination also varies. This current study conceptualizes self-advocacy as one of the most important subconstructs within self-determination. An understanding of the development of self-

advocacy skills in youth of all ages is imperative to both improving instruction of self-advocacy skills and helping youth with disabilities become self-determined adults.

A vital need in self-advocacy research is accurate measurement of these skills and documentation of the effects interventions have on development of self-advocacy in youth. The two measures designed to quantitatively assess self-advocacy skills that existed prior to this study do not fully address the construct of self-advocacy for students with disabilities. Specifically, the Self-Advocacy Readiness Scale (Harris, 2008) measures minority students' preparedness to self-advocate and aspirations to have control in their lives rather than the self-advocacy skills that students with disabilities need to develop. The Self-Advocacy Interview for Students (Brunello-Prudencio, 2001) does not adequately include items that assess the concepts of leadership and knowledge of rights. Furthermore, neither measure provides validity evidence for use with youth in elementary school. Similarly, none of the self-determination measures that have been used in self-advocacy research assess all four components included in the definition of self-advocacy, and none have been validated specifically for youth with ADHD.

Purpose of the Current Study

The primary purpose of this study was to develop a measure of youth's self-advocacy skills (the Self-Advocacy Measure for Youth; SAMY) as reported by caregivers. The second purpose was to provide preliminary empirical data to support the validity and reliability of score interpretation for youth with ADHD in elementary school.

The development of the SAMY contributes to the fields of psychology and education by creating a measure of the broad construct of self-advocacy for students with disabilities and providing initial evidence for the use of this measure to assess self-

advocacy skills in elementary school students with ADHD receiving either Section 504 or special education services. This measure purposefully assesses self-advocacy in youth from the perspective of teachers and caregivers due to the interpersonal interaction required in order for a person to engage in of self-advocacy. The findings from this study provide initial data regarding current levels of self-advocacy skills for youth with ADHD at the elementary school level. The overall goal in developing this measure was to provide school psychologists, counselors, and other educators with a measure to assist with collecting baseline self-advocacy data, selecting evidence-based interventions to further develop self-advocacy skills, and monitoring the impact of these interventions for youth with ADHD.

Research Questions and Hypotheses

Parents from two large, demographically diverse counties completed the SAMY to assess the levels of self-advocacy skills that elementary school students with ADHD are demonstrating in their daily lives. The research questions explored and related hypotheses are stated below:

1) What items best assess the construct of self-advocacy skills in youth with ADHD at the elementary school level?
    a. The first hypothesis was that the items developed through the processes indicated in Phase 1 of the study would be supported for measuring self-advocacy skills in youth with ADHD at the elementary school level through data gathered in Phase 2.
    b. The second hypothesis was that item and subscale characteristics would support a sequential progression of self-advocacy skill

development that mirrors cognitive, language, social, and emotional development.

2) To what extent are the scores from the Self-Advocacy Measure for Youth reliable for elementary students with ADHD?
    a. The first hypothesis was that the SAMY total and subscale scores would demonstrate moderate internal consistency as measured by Cronbach's alpha due to the uniqueness of each variable presumed by the formative measurement model utilized to develop the items.
    b. The second hypothesis was that test-retest analyses would provide strong evidence of support for the reliability of scores provided by caregivers over a one month period of time.
3) What factor measurement model is supported as the most appropriate model for interpreting the Self-Advocacy Measure for Youth in elementary students with ADHD?
    a. The hypothesis was that the four construct conceptualization of self-advocacy utilized to develop the SAMY would be supported by statistical analyses indicating a four-factor measurement model for interpreting the scores elementary students with ADHD obtain from caregivers on the SAMY.
4) To what extent is the interpretation of scores on the Self-Advocacy Measure for Youth valid for elementary school youth with ADHD?
    a. First, evidence of validity was indicated during test development procedures. Second, based on information gathered during the

literature review, the prediction was that any self-determination measure chosen for comparison with the SAMY would likely yield only a moderate correlation between self-determination and self-advocacy. Therefore, the hypothesis was that comparison of SAMY Total Scale scores to the Total scores on the AIR would reveal a moderate correlation, providing evidence of discriminant validity.

5) To what extent do elementary school youth with ADHD exhibit self-advocacy skills?

    a. The first hypothesis was that caregiver ratings of elementary students' self-advocacy skills would be similar across recruitment locations, indicating that recruitment location did not significantly impact scores.

    b. Given that students with an IEP are mandated to participate in development of their IEP while students with a Section 504 Plan are not, the second hypothesis was that youth identified as having ADHD and an IEP would obtain higher overall indications of their self-advocacy skills than compared to those with a Section 504 Plan.

    c. The final hypothesis was that youth in the upper elementary school level (grades 3-5) would obtain significantly higher overall scores than those in the lower elementary school level (grades K-2) based on the premise that the development of self-advocacy skills follows typical sequence of human cognitive, social, emotional, and language skill development.

Summary of Key Terms

Self-advocacy. Self-advocacy is defined as the integration of one's knowledge of self, knowledge of rights, ability to be able to communicate about this knowledge with others, and leadership skills. Self-advocacy is a key subconstruct of the construct self-determination.

Knowledge of self (KS). Knowledge of self is defined as an individual with a disability's understanding of one's own strengths, interests, preferences, goals, aspirations, best modes of learning, individual characteristics of one's disability, needed environmental supports, needed accommodations and assistance, and one's personal responsibilities related to reaching for one's dreams and potential.

Knowledge of rights (KR). Knowledge of rights is the understanding a person with a disability has of his or her rights related to the disability and knowledge of how to access these rights.

Communication skills (C). Communication skills are defined as the capability a person with a disability has to assertively express his or her knowledge of self and knowledge of rights in order to negotiate and obtain appropriate services and resources.

Leadership skills (L). Leadership skills include one's understanding of the whole group of people with the disability, their rights as a whole group, roles and dynamics within teams, available resources, and how to work within an organization in order to advocate for the rights of others and take political action.

Self-determination. Self-determination is defined as the attitudes and skills that individuals with disabilities use to determine and achieve personal goals. For the

purposes of this study, self-advocacy is operationally defined as one of the most important subconstructs within self-determination.

CHAPTER TWO

Literature Review

This chapter reviews the relevant literature in order to provide the context and rationale for the development of the Self-Advocacy Measure for Youth (SAMY). The review begins with a discussion regarding the relationship between self-advocacy and self-determination and the definition of self-advocacy used in this study. Next, a brief overview of the history of self-advocacy for students with disabilities served in special education and a discussion of self-advocacy rights for students with ADHD is provided. Information regarding the extent to which students with disabilities demonstrate self-advocacy skills follows. This research documents the gap between students' right to self-advocate and the rate in which students are engaging in self-advocacy. Then, research is presented regarding the general outcomes associated with self-advocacy interventions. This literature provides the rationale for understanding students' ability to self-advocate and implementing interventions to increase these skills in youth. A discussion of previous investigations of self-advocacy in children and adolescents at the secondary, middle school, and elementary school levels follows. Intervention studies that include or specifically target students with ADHD are also summarized. Because a vital element in conducting self-advocacy research is utilizing appropriate measurement methods, a review of the instruments commonly used in self-advocacy research is provided. Information about the alignment with the construct of self-advocacy used for the proposed study, validity evidence for use with elementary level students, and validity

evidence for use with students with ADHD is given for each measure. This chapter concludes with a discussion of the need to develop a psychometrically sound measure of self-advocacy skills that can be used with elementary school students with ADHD.

The Construct of Self-Advocacy

The relationship between self-advocacy and self-determination. Self-determination theory (SDT) presumes that people have an inherent tendency to expand their potential and engage in autonomy (Deci & Ryan, 2002). Furthermore, healthy development and successful personal outcomes extend from exhibiting both adequate self-determination and social integration. SDT proposes three basic psychological needs that must be met: autonomy, competence, and relatedness. Autonomy is when one feels in control of directing one's own behavior. Competence includes expressing one's skills effectively within provided social opportunities. When one feels a sense of belonging with others and their community, they experience relatedness. These needs are considered universal in that people across genders, cultures, with or without disabilities, etc., innately strive to achieve these needs as part of successful human development.

While SDT can be applied to all people, the origins of applying self-determination to persons with disabilities did not begin until the late 1980's (Ward & Meyer, 1999). Deinstitutionalization and civil rights movements for other groups opened the door for people with disabilities to seek greater independence and power to make decisions for themselves. In the 1970's, people with disabilities began taking classes that taught self-advocacy skills, such as making a decision for oneself and understanding roles in groups. Self-advocacy became a crucial factor in achieving meaningful life outcomes for people with disabilities. Eventually, in 1988, the Office of Special Education and Rehabilitation

Services (OSERS) expanded the notion of rights for people with disabilities from self-advocacy to the larger conceptualization of self-determination. OSERS spawned a national movement for people with disabilities to be included and have a sense of belonging with nondisabled persons, to be provided opportunities to experience competence, and be autonomous individuals to the extent possible.

Since the birth of applying SDT to persons with disabilities, numerous operational definitions of self-determination have emerged. Similarly, how self-advocacy relates to self-determination has been conceptualized in a variety of ways. One view is that self-advocacy is a subconstruct of the higher order construct of self-determination (Algozzine, Browder, Karvonen, Test, & Wood, 2001). In this view, the definition of self-determination would fully encompass all the skills included in the definition of self-advocacy, while also including skills beyond the scope of the definition of self-advocacy (see Figure 1). For example, after a thorough review of the literature and gathering expert opinions, Algozzine and colleagues (2001) conceptualized their definition of self-determination as including the following components: choice making, decision making, problem-solving, goal setting and attainment, self-advocacy, self-efficacy, self-awareness and understanding, self-observation, evaluation, and reinforcement. Additionally, the weight or importance of self-advocacy to the overall construct of self-determination varies within this perspective. Some theorists describe all of the skills within self-determination as being equally important to becoming a self-determined person. Others conceptualize self-advocacy as one of the most important skill sets to master within self-determination (Algozzine et al., 2001).

Figure 1. Self-advocacy as a subconstruct of the higher order construct of self-determination. All of the skills included in the definition of self-advocacy are encompassed by the definition of self-determination.

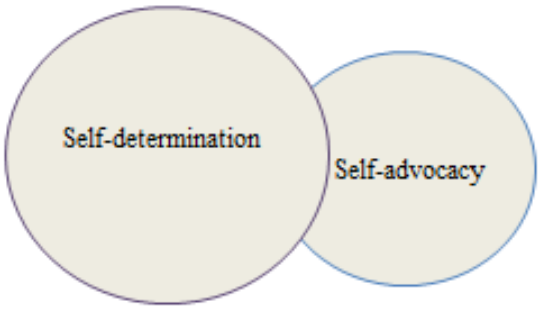

Figure 2. Self-determination and self-advocacy both as higher order constructs. Some skills are common to both self-determination and self-advocacy, while each construct retains unique skills.

The second perspective of the relationship of self-advocacy to self-determination takes the importance of self-advocacy one step further. This perspective purports that self-advocacy and self-determination are separate higher order constructs of equal importance. In this conceptualization, some commonality between the skills needed to be a self-advocate and self-determined exists, while each construct maintains skills that are unique (see Figure 2). These differences in defining the relationship between self-determination and self-advocacy have hindered the advancement of self-advocacy research.

The 1988 OSERS' definition of self-determination maintains the essence of SDT when defining self-determination as the attitudes and skills that individuals with disabilities use to determine and achieve personal goals (Ward & Meyer, 1999). Additionally, this definition also incorporates self-advocacy as a subconstruct under the broader construct of self-determination. Based on this definition and the previous common interpretations among educators and researchers in the field, the present study conceptualizes the self-advocacy as one of the most important subconstructs within self-determination.

Defining self-advocacy. Another major limitation to self-advocacy research has been the variety of ways that self-advocacy itself has been conceptualized and operationalized. Test, Fowler, Wood, and colleagues (2005) conducted a systematic, chronological review of how self-advocacy has been defined in the literature related to persons with disabilities. Most researchers, theorists, and educators agree that self-advocacy is a broad ability consisting of several narrower skills that a person with disabilities develops to achieve his or her own liberties and pursuits. However,

inconsistencies as to which of these subconstructs are included in the broad construct of self-advocacy has complicated the interpretation of self-advocacy research. The first draft of the framework of self-advocacy for students with disabilities was based on the subconstructs commonly included in the definitions of self-advocacy. Subsequently, key stakeholders, including researchers in the fields of self-advocacy and self-determination, persons with disabilities, and teachers and parents of students with disabilities, provided input that was utilized to further shape the framework. The final proposed definition of self-advocacy includes four subconstructs: knowledge of self, knowledge of rights, communication skills, and leadership skills.

Following human cognitive, social, and language development in which youth evolve from concrete to abstract reasoning, from egocentric to integrated perspective-taking, and achieve greater levels of negotiation skills (Eccles, 1999; Gallagher, 1993; Selman, 1971; Walker, 1980), self-advocacy skills are hypothesized to follow in a similar developmental sequence. The framework of self-advocacy for students with disabilities recognizes knowledge of self and knowledge of rights as the foundational skills involved in self-advocacy. As one's knowledge in these areas grows, communication skills that will enable the student to assertively share his or her self-awareness and knowledge of rights with others in appropriate ways also needs to develop. Finally, leadership skills enable the student to advocate for the needs within the dynamics of groups and systems. Some researchers argue that leadership may not be a required skill in order to be an effective self-advocate (Johnson, 1999); however, leadership is retained as a key element in the definition of self-advocacy because a student must have these skills in order to

advocate effectively at the systems level, such as for oneself at an IEP meeting or for the group as a whole within an organization.

The conceptualization of self-advocacy as several unique skills that in sum determine how well a student with a disability advocates for him or herself reflects a formative model of measurement of this construct (Cenfetelli & Bassellier, 2009). In a formative model, changes in the indicators (knowledge of one's self and disability, knowledge of one's rights, communication skills, and leadership skills) cause variation in the global construct (self-advocacy). The formative model is similarly demonstrated for each of the four subconstructs that are included in the global construct of self-advocacy. Each subconstruct is represented by observed unique skills that are theoretically developmental in sequence, and changes in these skills create changes in the subconstruct. While this model is primarily formative, reflective characteristics also exist in that the indicators are all related to the broad latent construct of self-advocacy.

The Right to Self-Advocate

Self-advocacy has been cited as a crucial factor in achieving meaningful life outcomes for people with disabilities since the 1970's (Test, Fowler, Wood et al., 2005; Ward & Meyer, 1999). Following a national movement spawned by OSERS for people with disabilities to self-advocate and engage in self-determination, empowering individuals with disabilities became a priority in the United States (Johnson, 1999). One result of this movement was the first federal legislation mandating that transition services be clearly stated on Individualized Education Plans (IEP) for students with disabilities. Subsequently, the reauthorized Individuals with Disabilities Education Act (IDEA) of 1997 required students to participate in the development of their transition goals and

service plans by the IEP that will be in place over their fourteenth birthday (IDEA, 1997). If a student is unable to attend the meeting, IDEA 1997 stipulates that measures must be taken to include the student's education preferences and desires in the goals and plan the team develops. Consequently, thirteen-year-old students with disabilities are expected to advocate for their individual schooling needs, communicate about their post-secondary school goals, and partake in developing the plan that will help them transition to their post-secondary education and career goals. However, not all students with disabilities are protected by the rights provided through IDEA. Students with ADHD are often recognized as having a disability by the Americans with Disabilities Vocational Rehabilitation Act (ADA) and receive a Section 504 Plan instead of an IEP (Schnoes, Reid, Wagner, & Marder, 2006). The ADA recognizes ADHD and other diagnosed psychological or physical conditions as a disability when the condition significantly negatively limits one or more major life functions. The ADA does not specifically require these students to participate in the development of their plans. Additionally, Section 504 plans include accommodations aimed to reduce the negative impact the disability appears to be having on accessing education, but they do not typically include services or additional instruction.

Self-advocacy rights and ADHD. The American Academy of Pediatrics (AAP; 2011) states that ADHD is the most common neurobehavioral disorder and one of the most prevalent chronic health conditions in school-aged children. Approximately 5-7% of youth in the United States are diagnosed with ADHD (Barkley, 2006). One way for students with ADHD to obtain legal rights to advocate for their educational preferences and goals is through receiving services and rights afforded under IDEA. Approximately

half of students with ADHD are identified to receive special education services and accommodations through IDEA provisions (Schnoes et al., 2006). Because ADHD is not a recognized category for which students can receive special education (IDEA, 2004), these students must have a comorbid diagnosis or meet additional eligibility criteria to receive services under an existing category of services. One study of a national sample found that students with ADHD who receive special education are most often identified for services under the category of learning disability (50%), other health impairment (OHI, 18%), or emotional disturbance (14%; Schnoes et al., 2006).

Students with ADHD who do not receive special education are not protected by IDEA regulations. Students identified as eligible to receive protections afforded by Section 504 of the Americans with Disabilities Vocational Rehabilitation Act (ADA) and provided a 504 Plan (ADA, 2008; Schnoes et al., 2006). At this time, no known statistics are available that describe the percentage of students with ADHD who have a 504 Plan. Without formal requirements mandating students with Section 504 Plans to engage in self-advocacy, these students are much less likely to receive instruction in how to advocate for their educational needs, and thus less likely to engage in self-advocacy.

Prevalence of Self-Advocacy

Even though federal legislation requires all secondary students receiving special education services to be included in making decisions about their educational and career goals (IDEA, 1997; IDEA, 2004), studies document a much lower prevalence of students effectively engaging in these self-advocacy activities. A national study found that only about half of states and entities meet these mandates to include students in the development of their IEP's (Williams & O'Leary, 2001). This comprehensive study

reviewed the practices of the 54 states and entities (e.g., the District of Columbia) receiving federal funding to support the transition from secondary to post-secondary school or employment for students with disabilities. The conclusion was that more than one third of the educational agencies did not invite students to attend transition or IEP planning meetings as required. An additional one-fourth of states did not demonstrate that they had included student interests and preferences in development of the plan when the student was unable to attend the meeting. Other findings indicate that students who attend their IEP meetings are often not included adequately in the development of their plans (Barnard-Brak, Davis, Ivey, & Thomson, 2009), or they are unprepared to advocate for themselves when asked to participate in educational decision-making (Izzo & Lamb, 2002). One conclusion that can be drawn from these studies is that most adolescents receiving special education generally have not developed the self-advocacy skills sufficient to communicate about their disability and obtain their legal rights.

Without the formal mandates included in IDEA, students with 504 Plans are even less likely to be afforded the opportunities to self-advocate or to be taught self-advocacy skills than students receiving special education services. One indicator that supports this claim is that no known data are available regarding the frequency with which school-age students participate in the development of their 504 Plans. Whereas these statistics are tracked and have been studied for students in special education, the same is not true for student participation in 504 Plans. Additionally, no published studies or dissertations measuring self-advocacy in youth with 504 Plans have been located. The conclusion is that the ability of school-age students with 504 Plans to self-advocate and the frequency with which these skills are demonstrated are unknown.

Since none of the studies regarding the extent to which students receiving special education engage in self-advocacy skills have reported data specific to students with ADHD, and no data are available regarding self-advocacy for students with 504 Plans, the conclusion can be made that the prevalence of self-advocacy skills in school-age students with ADHD is also unknown. In comparison, limited data regarding the extent to which post-secondary students with ADHD engage in self-advocacy skills are available. One study of college students with ADHD provides preliminary quantitative and qualitative information regarding their engagement in self-advocacy. This study surveyed 97 college students registered with a university Office for Students with Disabilities as having AD[H]D about their knowledge of and comfort level with using self-advocacy skills (Spoulos, 2006). The researcher-developed survey asked 10 questions about the students' experiences with disclosure about their disability. The researcher averaged each student's responses on several questions to form a score for Comfort Level disclosing with faculty (1= "not comfortable," 5= "extremely comfortable"). The mean of student responses was 3.63, suggesting the average student felt at least fairly comfortable disclosing their diagnosis of AD[H]D. The same procedure was utilized with different questions on the survey to identify each student's ability to self-advocate (1= "does not know how to self-advocate," 5= "excellent self-advocacy skills"). The mean of student responses on these questions was 2.24, indicating that the average student had difficulty demonstrating self-advocacy knowledge and skills. For example, when asked how familiar they were with the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, the average student response to a 5-point Likert Scale (1= "not familiar", 5= "extremely familiar") was 1.89. After conducting a

regression analysis, the researcher stated that students who reported feeling knowledgeable about how to self-advocate were only approximately 5% more willing to disclose that they have AD[H]D to their professors compared to students who reported feeling less knowledgeable. The researcher concluded that most students with AD[H]D are not sufficiently familiar with their rights provided by federal law and lack the ability to effectively describe their AD[H]D related symptoms and needs to their instructors. Whether these college students previously received services in special education or through a 504 Plan in secondary school is unknown. Given the statistical likelihood that some of the students received special education and some of the students had a 504 Plan (Schnoes et al., 2006), the speculation can be made that neither program adequately prepared students with ADHD to self-advocate at the post-secondary education level.

These studies demonstrate that students with disabilities across school levels exhibit a disparity between their right to self-advocate and the frequency with which they are utilizing self-advocacy skills. More research is needed regarding students' ability to self-advocate at all levels. A better understanding of elementary students' current levels of self-advocacy skills would facilitate implementing effective interventions to increase self-advocacy skills for these students, and, consequently, create the foundation upon which further skill development can be achieved throughout students' schooling. A summary of self-advocacy intervention research in general and at each school level follows.

Self-Advocacy Research

Contributions of self-determination research to understanding self-advocacy.

Self-advocacy literature tends to cite self-determination research in the discussion of

understanding self-advocacy skill development (Malian & Nevin, 2002). This practice is likely due to the tendency to assume that self-determination research operationally includes self-advocacy as a key component. Research on self-determination must be carefully examined to determine if the outcomes contribute to the understanding of self-advocacy skill development in youth. First, the definition of self-determination must include self-advocacy as a key element. Second, the operationalized definition of self-advocacy must include all four components: knowledge of self, knowledge of rights, communication skills, and leadership skills. While most theorists, researchers, and educators claim to subscribe to the perspective that self-advocacy is an essential component under the broader construct of self-determination (Test, Fowler, Wood et al., 2005), the reality is that the contributions of self-determination research to understanding self-advocacy skills in persons with disabilities is quite limited.

In 2001, Algozzine and colleagues conducted a meta-analysis of all empirically-based intervention studies that included components of self-determination across all ages. They found 22 quantified intervention studies published between 1972 and 2000. The mean effect size across group studies was 1.38 and 84% of interventions demonstrated a positive effect. The authors interpreted these results as significant, moderate gains. Single-subject research studies demonstrated even stronger effects. The median percentage of nonoverlapping data (PND) for 13 single-case design studies was 95%. Seven of these studies demonstrated positive effects with 100% PND, meaning that no data points overlapped from baseline through intervention. These findings support that people who are taught self-determination skills typically show significant, positive improvements in educational and vocational skills and outcomes.

Algozzine and colleagues (2001) reported that one of the two most common themes reported in self-determination research was self-advocacy; however, the majority of the information garnered from the self-determination research cannot be used to increase the understanding of outcomes related to self-advocacy interventions (Test, Fowler, & Brewer et al., 2005). Of the 51 quantitative and qualitative studies related to self-determination identified in their meta-analysis, only 14 of the studies included at least one of the four components in the definition of self-advocacy: knowledge of self, knowledge of rights, communication skills, and leadership skills. Only one study included all four components of self-advocacy. The reality is that most self-determination research has not operationally defined self-determination so that it sufficiently included all of the components of self-advocacy in order to actually contribute to the understanding of self-advocacy skills. Therefore, caution should be taken when considering if and how self-determination research applies to understanding self-advocacy development in youth. The particular details about which components of self-advocacy were included in the operational definition of self-determination need to be identified and analyzed accordingly. The findings from these reviews highlight the need for research specifically designed to measure self-advocacy skill development and related outcomes.

General findings of self-advocacy intervention research. Four years after Algozzine and colleagues' self-determination meta-analysis, Test, Fowler, Brewer, and Wood (2005) conducted a systematic review of intervention studies that specifically addressed one or more of the components of self-advocacy. They identified 25 total studies published between 1972 and June, 2004 and provided descriptive information on

the sum of these studies. Twenty-three of these studies reported positive effects of the self-advocacy interventions on outcomes measures. Of the 11 group intervention studies providing quantitative data, nine demonstrated statistically significant increases in self-advocacy skills. For example, multiple studies demonstrated that students increased their ability to communicate assertively with others both compared to their own skills prior to the intervention and compared to students who did not receive the intervention. Findings also indicate that students who received instruction about their disability increased their knowledge and ability to communicate about their disability. The remaining two group quantitative studies that did not find statistically significant outcomes provided anecdotal support of the positive influence self-advocacy interventions had on the students. Similar to the findings of the group studies, all 11 single-case design studies demonstrated positive outcomes across multiple students or across multiple target behaviors. Outcomes in these studies included increased number and quality of contributions to the development of the student's IEP, increased use of help-seeking behaviors, and improved ability to communicate about their preferences compared to prior to receiving the interventions. Self-advocacy intervention research can be further broken down into the ages or school-level of the population investigated. Reviewing the research in this manner paints a clear picture that the majority of self-advocacy research to date has involved secondary students and adults. A dearth of research exists involving younger students.

Secondary students and adults. Studying the self-advocacy skills exhibited by secondary students and adults is an important step to understanding the pathway for young students with disabilities to learn the self-advocacy skills necessary to become

competent and self-determined adults. As 22 of the 25 intervention studies identified in Test, Fowler, Brewer, and Wood's (2005) systematic review of self-advocacy research involved high provide most of the information available regarding self-advocacy skill development. In summary, these studies consistently document that adults with disabilities who demonstrate greater self-advocacy also have more positive educational, career, and quality of life outcomes. For example, Lock and Layton (2001) created a self-advocacy intervention program for post-secondary education students with learning disabilities. The intervention program assisted the students with recognizing their learning strengths and challenges, identifying strategies they could put in place themselves to reach their education goals, identifying accommodations that were both necessary and feasible for their instructors, and developing a Self-Advocacy Plan to facilitate communicating about their learning disability with their instructors. The researchers used a qualitative approach to determine that students demonstrated a greater knowledge of themselves and their learning abilities after going through the intervention program than prior to the program. Additionally, the investigators concluded that the more the students participated in the intervention program activities, the more positive outcomes the students reported.

Positive outcomes have similarly been demonstrated for secondary students who participate in self-advocacy interventions. Powers and colleagues (2001) used the TAKECHARGE for the Future curriculum to teach high school students with disabilities self-advocacy skills to facilitate their transition from high school to post-secondary school or employment. This intervention study is the only study identified in the self-advocacy intervention review (Test, Fowler, Brewer et al., 2005) that encompasses all

four components of self-advocacy included in the definition of self-advocacy. In order to measure all of the skills, the investigators had to utilize four different measurement instruments. The Educational Planning Assessment (EPA) was created by the researchers for this study in order to have a way to measure students' participation in the transition planning process. Standardized item alpha coefficients for the EPA for the 43 participants in this study ranged from .84 to .94 for pre- and post-tests for the youth, parent, and teacher versions. The Transition Awareness Survey was utilized to measure several aspects of students' knowledge of rights. Standardized item alpha coefficients for this instrument for the participants in this study ranged from .87 to .92. The Family Empowerment Scale was administered in order to assess how empowered students were to manage everyday situations, advocate for others' needs, and access needed services. This scale demonstrated standardized item alpha coefficients from .84 to .92. Therefore, the scores on all three measures demonstrated adequate internal consistency. An additional observational coding system was completed in order to measure participation behavior in IEP transition meetings. The findings of the pre- and post-tests of all four measures indicated that the students in the treatment group demonstrated significant growth in all targeted skill areas compared to the wait-list group, providing initial strong evidence for the positive effects of the TAKECHARGE for the Future curriculum on secondary students' self-advocacy skill development. However, the investigators acknowledge that the measures used serve as a limitation of the study. A need to develop a global measure of self-advocacy skills that is psychometrically sound is indicated.

The summary of self-advocacy intervention research with adults and high school students with disabilities is that they experience significant, positive effects both compared to their own skills prior to the intervention and compared to persons with disabilities who do not receive the intervention. This research is valuable because it provides a vision of what characteristics are important for students with disabilities to develop in order to succeed in the future. However, the need for a more empirically sound way to measure self-advocacy is indicated.

Middle school students. Educators and researchers continually state the need for students with disabilities to develop self-advocacy skills *prior to* high school (Izzo & Lamb, 2002; Meglemre, 2010; Test, Fowler, Wood et al., 2005) Students need to develop these skills before the age of fourteen years old when they are legally required to use these skills to participate in the development of their IEP's. Self-advocacy skills can facilitate more successful transitions between grade levels and communication with teachers regarding students' needs at all age levels. Test, Fowler, Brewer, and Wood (2005) accentuated this point when they stated, "Waiting until adulthood or even until high school is too late for the development of effective self-advocacy" (p. 44). Yet, few self-advocacy studies have included middle or elementary school level students.

The systematic review of self-advocacy intervention studies from 1972 through June 2004 revealed only two studies that included at least one of the four components in the definition of self-advocacy and middle school students as participants (Test, Fowler, Brewer et al., 2005). Both of these studies used the same intervention and single-case study design. Hammer (2004) used the Self-Advocacy Strategy (Van Reusen, Bos, Schumaker, & Deshler, 1994) with three middle school students to increase their

participation in their IEP meetings. Two of the students were identified as having learning disabilities and the third student was described as having multiple disabilities (Tourette syndrome, obsessive-compulsive disorder, attention-deficit disorder, and pervasive developmental disorder–not otherwise specified with borderline cognitive ability). Students were asked 10 open-ended questions about their skills, their goals, and the interventions that work best for them. The researcher counted and tracked across time the number of positive, relevant contributions each student made when answering the questions. All three students who completed the Self-Advocacy Strategy made marked increases in the frequency with which they contributed positive, relevant information from baseline to their final observation during their educational planning meetings. Test and Neale (2004) engaged in a similar study of how the Self-Advocacy Strategy affected four eighth grade students' participation in their IEP meetings. The four students received special education services based on the following disabilities: mildly intellectually disabled, behavioral and emotional disabled, and learning disabled (two students). The same open-ended probes and scoring system were used to observe the students' participation in their IEP meetings as used by Hammer (2004); however, the Arc's Self-Determination Scale (Wehmeyer, 1995) was also administered as a pre- and post-measure of the students' self-reported autonomy, self-regulation, empowerment, and self-realization skills. All four students demonstrated clear gains in the frequency of their positive, relevant contributions from baseline to final observation. The investigators reported that the self-advocacy skills gained through participation in the Self-Advocacy Strategy did not translate into significant growth in the global construct of self-determination as measured by the Arc's Self-Determination Scale. This finding is likely

related to the lack of alignment of the operational definition of self-determination used in this scale with the components of self-advocacy taught through the Self-Advocacy Strategy. Both of the preceding studies lacked an appropriate, psychometrically sound measure of self-advocacy that would facilitate more accurate assessment of students' self-advocacy skills.

A search of both published studies and dissertations in the Proquest Dissertations database from June 2004 through 2011 revealed only three additional studies that specifically utilized a self-advocacy intervention with middle school level students. The first of these studies used a multidimensional school-based intervention with 68 students all identified as having a learning disability (Mishna, Muskat, Farnia, & Wiener, 2011). The intervention program included three components: teachers, parents of students with learning disabilities, and non-learning disabled peers participated in the program Walk a Mile in My Shoes to develop increased understanding of students with learning disabilities; consultation was provided to the teachers of the students with learning disabilities; and the students with learning disabilities participated in a group self-advocacy skill development curriculum. The researchers measured the effects of the overall intervention on students' self-advocacy skills using a structured interview protocol called The Self-Advocacy Interview for Students (SAI; Brunello-Prudencio, 2001). This protocol is designed to measure four aspects of the student's knowledge related to self-advocacy. These four aspects are: 1) knowledge of learning disability; 2) knowledge of learning style; 3) knowledge of resources, services, support, and accommodation; and 4) knowledge of ability to succeed. Based on growth from pre-intervention scores to scores several months after the intervention, mean scores for all

students demonstrated statistically significant improvement in the self-advocacy skills measured on the SAI. These findings support the effects this multidimensional intervention can have on students' knowledge in these specific areas. However, the researchers acknowledge that a key limitation to the study is the reliance on students' self-reports in determining growth in skills. Additionally, the SAI only measures some of the skills included in the global construct of self-advocacy; therefore, an indication of growth in overall self-advocacy related to this intervention is not provided.

Studies including students with ADHD. None of the previous three studies were specifically designed for students with ADHD or identified students with ADHD as participants. Of the two remaining self-advocacy studies that included middle school participants, the first one discussed the inclusion of students with ADHD, but specific data on the number of students with ADHD or the outcomes for these particular students were not provided (Meglemre, 2010). This dissertation study included 20 participants who received the intervention. All of these students received special education services: 14 of the students were identified as Learning Disabled, five students were identified as OHI, and one student was identified as Hard of Hearing. The researcher acknowledged the general statistic that most students who receive services as OHI are medically diagnosed with ADHD. Specific information regarding how many of the five students identified as OHI in this study had diagnoses of ADHD is not provided. This study used a curriculum generated by the primary investigator to teach eighth grade students self-advocacy skills. The first method utilized to measure growth in these skills was a researcher-created Student Questionnaire administered before and after the students' transition to high school IEP meetings. This self-report questionnaire attempted to gather

information regarding two subconstructs included in the global construct of self-advocacy: knowledge of self/disability and communication skills. A researcher-created observation protocol also was utilized to measure growth in communication skills. This measure combined information on frequency of pertinent, observable communications and ratings of the quality of these communications by the student during his or her transition IEP meeting. The findings support that students who participated in the curriculum improved in both their knowledge of themselves and the frequency with which they communicated in their IEP meetings. However, insufficient evidence of the validity of using the Student Questionnaire and the observation protocol to assess self-advocacy skills was provided. Additionally, these instruments only attempted to measure some of the skills included in the definition of self-advocacy; therefore, an indication of growth in overall self-advocacy related to this intervention is not provided.

The fifth and final self-advocacy study that included middle school students is the only investigation that specifically identified students with ADHD as participants. This dissertation study is the only known attempt to quantitatively measure the impact of teaching youth with ADHD self-advocacy skills. The purpose was to measure how the Skills for Academic Success Curriculum impacted three outcomes: self-awareness/self-advocacy, homework completion, and organizational skills (Shimpi, 2004). The investigator cited the absence of a psychometrically sound measure to assess self-advocacy/self-awareness in adolescents with ADHD as the reason why she created the Skills for Academic Success Self-Report. The instrument contains eleven 5-point Likert-scale items related to self-awareness/self-advocacy and 9 questions related to homework and organizational skills. Nine of the 11 questions in the self-awareness/self-advocacy

section asked students to rate how much they disagreed (1=strongly disagree) or agreed (5= strongly agree) with statements, such as "I know what it means to have ADHD," "I can do different things well," "I know how I learn best," and "setting goals helps motivate me" (Shimpi, 2004, p. 219). The last two questions asked students to rate how often (1=never to 5= very often) they talked to a teacher about how ADHD affects them at school and to request help to succeed in school. Comparison of pre- and post-test means found that all five students demonstrated increases on 8 of the 11 questions. The author also conducted Chi-square analyses to determine the effect size between pre- and post-test scores of the group on this instrument and found no significant differences.

A major limitation is that only five students participated in this study, and the author recommended that results be interpreted cautiously. This sample size limited the statistical analyses that could be conducted and the ability to collect evidence of the validity of using this instrument to measure self-advocacy skills in youth with ADHD. A lack of evidence exists to indicate how well the items in the self-advocacy/self-awareness scale accurately measure the components included in the definition of self-advocacy. Additionally, problems using a self-report instrument to measure skill levels were not addressed. Youth with disabilities have consistently been shown to be poor self-reporters of their actual abilities across a variety of skills (Alvarez & Adelman, 1986; Stone & May, 2002). Studies have also specifically demonstrated that youth with ADHD are poor self-reporters (Hoza et al., 2004). The tendency for students with learning disabilities and ADHD to demonstrate a substantial difference between their reported views of their ability and their actual ability, also known as positive illusory bias, provides evidence

that self-report measures of self-advocacy skills are likely not the most accurate assessment method.

Limitations of middle school studies. The existing studies with middle school students all demonstrate the positive effects of self-advocacy skill instruction on students' ability to participate in their IEP meetings, knowledge related to self-advocacy, and/or ability to communicate with others regarding their disabilities. However, findings from only five studies at the middle school level are insufficient to understand the development and prevalence of self-advocacy in these students. Each study measures different aspects of self-advocacy and none of the studies successfully measure all of the components included in the global construct of self-advocacy. The need for additional research on self-advocacy skill development in middle school students is evident, as is the need for research specifically with middle school students with ADHD.

A major limitation of self-advocacy research is the lack of a psychometrically sound instrument to measure all of the skills included in self-advocacy. All five of the middle school studies support the need for an empirically validated measure that can adequately assess the global construct of self-advocacy in youth. None of these studies were able to sufficiently demonstrate the effects of self-advocacy skill instruction on global self-advocacy skill development because of the lack of a psychometrically sound instrument to do so. Therefore, the need remains for an instrument with psychometric support for the valid and reliable measurement of global self-advocacy skills.

Elementary school students. Similar limitations exist in the research on self-advocacy skills in children in elementary school. A limited number of studies with participants in the elementary school level exist. The systematic self-advocacy

intervention review found no studies in which at least one of the components of self-advocacy was included as a dependent variable and children in the elementary school level were included as participants (Test, Fowler, Brewer et al., 2005). The subsequent search through 2011 revealed only three studies that examined the development of self-advocacy skills in elementary students. Several descriptive accounts of intervention designs or the processes used to implement interventions aimed to improve one or more self-advocacy skills with elementary school students were located; however, these studies did not provide specific quantitative or qualitative data regarding the outcomes of these interventions and are not included in this review.

Two of the three investigations of self-advocacy interventions with elementary school participants utilized qualitative methods to document outcomes. One of these studies analyzed pre- and post- IEP meeting interviews with students, parents, and teachers; anecdotal notes from the IEP meetings; and information from document reviews to determine themes related to students taking an active role during their IEP meetings (Danneker & Bottge, 2009). Four students receiving special education services in a Kindergarten through sixth grade elementary school participated in this study: a fourth grade student receiving services for a learning disability, a fifth grade student receiving services as emotionally-behaviorally disabled, a sixth grade student receiving services as OHI due to liver disease, and a sixth grade student receiving services for a learning disability with an additional diagnosis of ADHD. Analyses of the qualitative information collected revealed several benefits and barriers to student-led IEP meetings. One identified benefit related to self-advocacy was an increase in students' knowledge of their own strengths and needs. Another reported theme was an increase in students'

confidence in and ability to communicate about their knowledge of self. This study supports that targeted interventions with elementary school students are related to improved self-advocacy skill outcomes.

The other qualitative study summarized information obtained from two years of student participation in the Building Awareness 5th Grade Smarts Unit (Merlone & Moran, 2008). All fifth grade students who received services in the school's learning center participated in the program. Additional information regarding number of students and their diagnoses was not provided. The program aimed to teach students to understand their strengths, areas of need, and how they can receive assistance. Major tenets of the program taught the students that self-advocacy is important and that they needed to understand how they learn best, what learning strategies are most beneficial for their learning style, and how to assertively seek help in order to be an effective self-advocate. The outcomes of this program were based on students' qualitative descriptions of what they remembered from the curriculum, what aspects they felt were most important, and whether they felt participation in the program was beneficial. The researchers reported a theme of positive statements from the students regarding each of these factors; however, they indicated the need for an assessment of how well the students generalized the skills they learned to actual classroom and IEP meeting situations.

Although both of these qualitative findings demonstrated support for teaching elementary school students self-advocacy skills, quantitative data are needed to better demonstrate the effects of these interventions on self-advocacy skill growth and achievement of personal and educational goals. Only one known study has attempted to

quantitatively measure self-advocacy skills in elementary age students. This study used a modified version of the I Can Use Effort intervention (Hickey & Howell, 1990), which is an elementary level revision of the Self-Advocacy Strategy (Van Reusen, 1994), to teach students the skills needed to participate in the IEP process (Neale, 2007). Four students receiving special education services participated in this study: a third grade student receiving services as educable mentally disabled (EMD), a fourth grade student receiving services for a learning disability, a third grade student receiving services for a learning disability, and a fourth grade student receiving services as EMD. The same open-ended probes and scoring system were used to track the students' growth in skills and participation in a mock IEP meeting as were used in previous studies with middle school students (Hammer, 2004; Test & Neal, 2004). Using a multiple baseline across students design, all four students demonstrated improvements in the quality of their responses from pre- to post-intervention. Additionally, all students were able to maintain their skills in order to communicate similar quality answers during their mock IEP meetings. Although this study provides the first quantitative evidence of self-advocacy skill development in elementary students, no evidence of the validity of the measure utilized was provided. Additionally, not all of the components included in the construct of self-advocacy were measured.

Limitations of elementary school studies. Findings from two qualitative and one quantitative study are not sufficient to provide an understanding of self-advocacy skill levels and growth in elementary age students. Furthermore, only one study explicitly identified a student with ADHD as included in the study, and none of the studies reported outcomes specific to students with ADHD. Similar to self-advocacy research with

middle school students, none of the elementary school level studies were able to sufficiently demonstrate the effects of self-advocacy skill instruction on global self-advocacy skill development because of the lack of a psychometrically sound instrument to do so.

Summary of self-advocacy research. As the evidence of the strong, positive relationship between self-advocacy skills and positive educational and life outcomes is becoming more and more apparent for secondary and post-secondary students, researchers are continuously calling for studies of self-advocacy skill development with younger students (Algozzine et al., 2001; Meglemre, 2010; Test & Neal, 2004). Quantitative evidence of students' current levels of self-advocacy skills and the impact of interventions on these skills for youth of all ages is imperative to helping students reach more positive educational and life outcomes. However, investigations into the self-advocacy skills of elementary and middle school students are sparse. The few existing studies provide limited quantitative data regarding self-advocacy skill levels and growth for younger students. Only one study explicitly cites the effects of an intervention on self-advocacy skill development for students with ADHD. All of the studies support a need for a comprehensive, psychometrically sound measure of self-advocacy in order to more effectively demonstrate the impact of interventions on self-advocacy skills for youth of all ages. The existing self-advocacy measures and self-determination measures that are often used in self-advocacy research are inadequate for measuring self-advocacy skills across school levels and for students with ADHD. The measures demonstrate insufficient alignment with the global construct of self-advocacy, lack of evidence to

support use with elementary and middle school students, and/or lack of validity evidence for use with students with ADHD.

Measurement of Self-Advocacy Skills

Existing quantitative self-advocacy and self-determination measures commonly used in self-advocacy research are reviewed. As demonstrated in the preceding summary of self-advocacy research, investigators have frequently created a tool to measure the specific self-advocacy skills targeted by the intervention as a means to document changes in these skills for that specific study. However, procedures for ensuring that the measure is psychometrically sound are typically not provided in the literature. Furthermore, evidence of validity for using the measure to assess the indicated self-advocacy skills with the indicated population was often not obtained. Self-advocacy measures that lack this evidence are not included in the present review. Self-determination measures commonly used in self-advocacy research are similarly reviewed.

Self-advocacy measures. Two quantitative self-advocacy measures with accessible psychometric properties were located for this review. These measures are discussed in terms of their alignment with the global construct of self-advocacy, validity evidence for use with youth at the elementary school level, and evidence for use with students with ADHD.

Self-Advocacy Readiness Scale. A search for measurement instruments that purported to assess global self-advocacy skills in youth and provided validity evidence of interpreting scores for youth revealed two instruments. The Self-Advocacy Readiness Scale was designed to measure minority students' preparedness to learn to self-advocate and desire to have control in their lives (Harris, 2008). Harris (2008) defines the

construct of self-advocacy utilized to develop this scale as including the value one places on cultural identity, understanding the influence of society and systems, ability to recognize one's personal and educational needs, and ability to assertively negotiate for these needs in light of how these actions affect others. The intended population for this measure is high school students; however, the initial validation study was conducted with college students. Based on responses from 164 college students, the full scale score of the Self-Advocacy Readiness Scale demonstrated a Cronbach's alpha coefficient of .86. The investigator considered this finding to surpass the commonly suggested .70 needed for demonstration of adequate internal consistency. Twenty-four of 55 items demonstrated corrected item-total correlations below .3, indicating poor correlations between these items and the overall scale. The five subscales demonstrated subpar to more than adequate internal consistency with the following Cronbach's alpha coefficients: .69 for autonomy, .66 for control, .83 for experience, .62 for knowledge, and .51 for motivation. Twenty items demonstrated corrected item-total correlations with their respective subscales below .3. An exploratory factor analysis (EFA) resulted in one factor accounting for 52.16% of the variance in the Self-Advocacy Readiness Scale, which indicates that this scale measures one construct rather than several constructs.

Several limitations to using the Self-Advocacy Readiness Scale for measuring self-advocacy skills in youth with disabilities are evident. First, the definition of self-advocacy provided in this study differs in important ways from the definition of self-advocacy proposed for research with students with disabilities. Specifically, Test, Fowler, Wood, and colleagues' (2005) framework of self-advocacy skills for students with disabilities defines self-advocacy as including knowledge of self and autonomy

skills, but it also includes knowledge of rights, communication skills, and leadership skills. This discrepancy may be related to the difference in the population studied (minority students versus students with disabilities) and how self-advocacy is conceptualized for this population. These differences result in items aimed to assess minority student readiness to self-advocate rather than students with disabilities' self-advocacy skills. Given that the intended population is different, the second limitation is that no evidence exists for use of this scale with students with disabilities. Finally, no evidence is provided to support using this scale with youth younger than 18 years of age.

Self-Advocacy Interview for Students. The second instrument specifically designed to measure self-advocacy skills is the Self-Advocacy Interview for Students (SAI; Brunello-Prudencio, 2001). The SAI was designed to measure students with learning disabilities' acquisition of self-advocacy skills. Brunello-Prudencio (2001) conceptualized the construct of self-advocacy into two main subconstructs: Knowledge and Communication. The subconstruct of knowledge includes general knowledge about learning disabilities; understanding one's own strengths and weaknesses in learning; awareness of one's learning style; knowledge of the resources, supports, and accommodations that will facilitate successful learning; and understanding that one can achieve goals despite having a learning disability. The subconstruct of communication includes the verbal and nonverbal skills a person needs to effectively communicate their knowledge and negotiate for the resources and support needed to succeed.

The initial study providing psychometric data on the validity and reliability of the SAI described participants as 53junior high school students with learning disabilities in seventh, eighth, and ninth grades (Brunello-Prudencio, 2001). The researcher reported

evidence of content validity based on procedures utilized to align items with the definition of self-advocacy conceptualized for this study. Calculations to provide evidence of internal consistency, correlations between the items and their respective subscales, and factor analysis were not conducted. Evidence of test-retest reliability based on Pearson's correlations was higher for the Knowledge subscale (.91) than for the Communication subscale (.56). The total SAI demonstrated adequate test-retest reliability (.86).

In 2011, Mishna and colleagues used the SAI to measure the effects of a multi-component intervention program on middle school students' self-advocacy skills. These researchers calculated the internal consistency of the total SAI measure for this study as α=.73. The internal consistency of the SAI subscales were calculated to be: Knowledge of Learning Disability α= .74, Knowledge of Learning Style α= .47, Knowledge of Resources α= .31, and Knowledge of Ability to Succeed α= .66. Test-retest reliability of the total SAI was .87.

The two subconstructs included in the conceptualized definition of self-advocacy for the SAI align well with some of the components of the framework definition of self-advocacy for students with disabilities (Test, Fowler, Wood et al., 2005), but discrepancies remain. The subconstruct of knowledge is similar to the Knowledge of Self component and has some overlap with the Knowledge of Rights component. Additionally, the Communication components are similar. The lack of inclusion of Leadership skills and misalignment with Knowledge of Rights are key differences. An additional limitation to using the SAI for measuring self-advocacy skills in youth is that

no evidence is provided to support using this scale with elementary level students. Finally, no evidence for using the SAI with students with ADHD is available.

Self-determination measures. Only two instruments designed to measure the global construct of self-advocacy that have reported psychometric evidence for their use were identified. Lack of validity evidence inhibits using either of these scales with elementary school students and youth with ADHD. Furthermore, neither of these scales has been used frequently in self-advocacy research. Therefore, a discussion of self-determination scales commonly utilized in self-advocacy research is provided.

Arc's Self-Determination Scale. The Self-Determination Scale (SDS) is a standardized, norm-referenced questionnaire that purports to measure the global construct of self-determination (Wehmeyer, 1995). This self-report measure is based on the functional theory of self-determination, and therefore has four subscales corresponding to the four essential characteristics of self-determined behavior: behavioral autonomy, self-regulation, psychological empowerment, and self-realization. The SDS was created in 1995 for use with adolescents with learning disabilities and mild intellectual disabilities receiving special education. According to the scale manual, the interpretation of scores has been validated for this population across the world. Initial reliability and validity indices are based on a study of 500 high school students 14-22 years old with cognitive disabilities. Cronbach's alpha for the overall scale is reported as .90. Cronbach's alphas for the subscales range from .62 and .90. The author suggests that the scales incorporating beliefs and perceptions have lower internal consistency due to the subjective nature of the items. Item statistics provide evidence of reliability of the SDS scores. Extensive validity evidence is described in the Procedural Guidelines for this

scale, including concurrent-criterion related validity, discriminant validity, and factorial construct validity.

Although this instrument has demonstrated reliability and validity for assessing the broad construct of self-determination, the instrument presents several limitations for assessing self-advocacy. Most importantly, while there is some overlap, the constructs measured by this scale differ significantly from those included in the definition of self-advocacy. Some of the aspects of self-realization align with the component of Knowledge of Self. The components of Knowledge of Rights, Communication Skills, and Leadership Skills are not adequately measured by the SDS. Furthermore, validity evidence for using this scale with elementary students, middle school students, and students with ADHD is not available. Despite these limitations, self-advocacy research studies have previously used the SDS in an attempt to document changes in self-advocacy skills (Test & Neal, 2004).

American Institutes for Research Self-Determination Scale. The AIR Self-Determination Scale (AIR) was developed in 1994 by Wolman, Campeau, Dubois, Mithaug, and Stolarski (1994). Although both the SDS and the AIR purport to measure the global construct of self-determination, research has identified significant differences in the conceptualized definitions of self-determination measured (Shogren et al., 2008). In comparison to the SDS that is based on the functional theory of self-determination, the AIR is based on the self-determination learning theory. This theory emphasizes the processes and environmental opportunities through which students become self-determined.

The AIR has four versions: Parent, Educator, Student, and Research Forms (Wolman et al., 1994). An initial field test was conducted on the preliminary AIR Educator Form to provide evidence of validity and reliability. This field test included 450 students with and without disabilities ages 6 - 25 years old. Therefore, the AIR Educator Form boasts utility for all school-age children (Wolman et al., 1994). Although students in the initial validation study were diagnosed with a broad range of disabilities, none of the students were reported to have a diagnosis of ADHD. Reliability evidence was indicated through alternative-item correlation (.91 to .98), split-half test (.95), and test-retest (.74) to demonstrate consistency over time. Support for internal consistency was demonstrated for the Educator Version of the AIR with a Cronbach's alpha of .95 and for the Student Version with a Cronbach's alpha of .92 (Shogren et al., 2008; Wolman et al., 1994). Evidence of differential test functioning is provided; however, no hypotheses or suggestions for the groups that did differ significantly on the overall test were presented. Factor analysis revealed two principal components similar to those predicted by the theory used to design the instrument. The Researcher Form includes the same items as the Educator version. No psychometric evidence of validity or reliability was provided for the Parent Form.

Although evidence exists to support using this instrument to measure one conceptualization of self-determination, the constructs included in the AIR do not sufficiently align with the constructs included in the definition of self-advocacy. None of the four components of self-advocacy appear to be adequately measured by the items included in the AIR. Evidence supports use of this instrument across elementary, middle,

and high school levels. No evidence is available to support using the AIR with students with ADHD.

Self-Determination Skills Evaluation Scale. The Self-Determination Skills Evaluation Scale (SDSES) is designed to assess self-determination skills in youth and young adults ages 14-20 years old diagnosed with an intellectual deficit through ratings of the student's skills observed in the previous three months by parents. The SDSES provides a global score and four subscale scores that measure: personal control, such as making choices and evaluating the effectiveness of the choice; self-regulation; problem solving, including understanding what resources are needed and effective to solve problems; and self-advocacy, including understanding one's rights and communicating assertively to advocate for oneself (Abbery, Rudrud, Arndt, Schauben, & Eggeeen, 1995). Construct validity evidence was gathered by creating items hypothesized to logically relate to the construct and supported by reviews of the items conducted by teachers, parents, and persons with disabilities. The SDSES demonstrated adequate item-total correlations (.78-.98) and test-retest reliability (.77-.88) for both overall and subscale scores during field testing.

Although the SDSES provides validity evidence for interpreting scores on the Personal Advocacy subscale as an indication of several constructs included in the definition of self-advocacy, this subscale does not measure all of the constructs included in the definition of self-advocacy. In other words, the conceptualization of the SDSES is that self-determination fully encompasses self-advocacy, but the reality is that the components of self-advocacy are only partially included in the items on the SDSES.

Additionally, the SDSES does not have evidence to support use with youth prior to high school or with students with ADHD.

Field and Hoffman Self-Determination Assessment Battery. The Self-Determination Assessment Battery includes the Self-Determination Knowledge Scale (SDKS), Self-Determination Parent Perception Scale (PPS), Self-Determination Teacher Perception Scale (TPS), Self-Determination Observation Checklist, and Self-Determination Student Scale (SDSS) (Hoffman, Field, & Sawilowsky, 2004). Initial psychometric information was gathered through a study of 416 students with and without disabilities, which provided norms for use with students ages 15 – 20 years old. A wide range of disabilities were represented in the study, with 3.8% of participants reported as receiving special education services as Other Health Impaired. Information regarding the medical diagnoses for the basis of being served in this category was not provided. Extensive procedural information and evidence of reliability and validity of this instrument for use with secondary level students is provided. The complexity of this assessment contributes to the need for a whole class period for it to be completed.

Similar to the other self-determination measures reviewed, the items in this assessment battery do not sufficiently measure all of the components included in the definition of self-advocacy. Another limitation is that no evidence is provided for use with elementary students, middle school students, or students with ADHD.

Summary of self-advocacy measurement. Prior to the current study, no measure existed that sufficiently assesses all of the components included in the definition of self-advocacy. Of the self-advocacy and self-determination measures reviewed, only one provides validity evidence for use with elementary students. None of the instruments

provide validity evidence for use with students with ADHD. The culmination of the examination of existing instruments is the clear need for the development of a quantitative measure that assesses all four of the subconstructs within the global construct of self-advocacy skills. Shogren and colleagues (2008) emphasize that there is a "critical need for researchers and practitioners to use an instrument that matches the skills/constructs they are trying to measure" (p. 106). Additionally, an instrument needed to be developed that demonstrates validity evidence for use with elementary school students and that is appropriate for students with ADHD receiving services through special education or that have a Section 504 Plan. This quantitative measure is vital to identifying students' current self-advocacy skills, planning for clinical and educational instruction to increase self-advocacy, and providing evidence for effective self-advocacy interventions that will guide students toward reaching their educational and quality of life potential.

Literature Review Conclusions

This chapter reviewed the relevant literature that provides the rationale for developing the Self-Advocacy Measure for Youth. Legislation documents the requirement of youth with disabilities receiving special education services to advocate for themselves beginning when they are 13 years old. Only some students with ADHD are served by special education; therefore, not all students with ADHD are afforded the same self-advocacy rights despite the need to develop self-advocacy skills as a means to overcome limitations associated with having ADHD. A summary of available information indicates that not all students with disabilities are demonstrating self-advocacy skills. Only about half of students in special education are provided the

opportunity at their IEP meetings, and an unknown, but likely lower, percentage of students with 504 Plans are participating in their plan development meetings. These findings further support the need for research to understand school-age students' ability to self-advocate and implement developmentally appropriate interventions.

General outcome studies consistently demonstrate strong, positive effects associated with increasing self-advocacy skills in individuals with disabilities (Test, Fowler, Brewer et al., 2005). These findings accentuate the need for youth to develop self-advocacy skills as an important method to achieving the quality of life outcomes they desire. However, most intervention studies have been conducted at the high school and post-secondary levels. The lack of intervention studies at the elementary and middle school levels demonstrates the imperative need for self-advocacy research and interventions with younger students with disabilities. Similarly, self-advocacy research specific to students with ADHD is needed.

One of the challenges associated with conducting self-advocacy research is that an appropriate measure to document students' self-advocacy knowledge and skills has not existed. No specific, validated measure of the global construct of self-advocacy for youth with disabilities has been available. Consequently, researchers have resorted to either creating measures without sufficient evidence that the items and scale are measuring self-advocacy as proposed, or utilizing existing self-determination measures despite inadequate alignment with the definition of self-advocacy. A review of the only two self-advocacy measures located prior to this study with any psychometric evidence and the common self-determination measures currently used in self-advocacy research with students with disabilities indicates that none of these measures have sufficient

support for measuring self-advocacy in youth with disabilities. None include all four of the key components included in the definition of self-advocacy, only one measure provides validity evidence for use with elementary level students, and none of the measures provide validity evidence for use with students with ADHD. The conclusion of this review is the critical need for the development of a measure of self-advocacy skills that can be used across school levels and with students with ADHD.

CHAPTER THREE

Methods

The purpose of this study was to develop a measure of youth's self-advocacy skills and provide preliminary validity evidence for use with elementary school students diagnosed with ADHD. This chapter provides a description of the rationale, research design, participants, measures, and procedures utilized in each of the two phases of this study: scale development and the investigation to gather preliminary support for the valid and reliable interpretation of scores for the intended population. The modifications made as a result of each step in the development of the scale are also provided.

Rationale

The global construct of self-advocacy proposed in the Framework of Self-Advocacy for Students with Disabilities includes the subconstructs of knowledge of one's self, knowledge of one's rights, communication skills, and leadership skills (Test, Fowler, Wood et al., 2005). Cobb, Lehmann, Newman-Gonchar, and Alwell (2009) found that multicomponent interventions result in greater overall positive effects compared to single-component interventions. Therefore, an assessment instrument was needed that would enable interventionists to appropriately measure all of the components included in the self-advocacy construct and the impact of interventions on the development of these skills in youth. Prior to this study, no measure existed that provided psychometric evidence that it adequately assessed the global construct of self-advocacy. None of the measures that have been used in previous self-advocacy research provide validity

evidence for use with elementary school students or students with ADHD. Therefore, the SAMY contributes to the field as the first measure with validity evidence to assess the global construct of self-advocacy and quantitatively measure elementary students' self-advocacy skills. The SAMY is also the first instrument with validity evidence for assessing self-advocacy skills in students identified as having ADHD.

Research Design

Crocker and Algina's (1986) steps to instrument development were utilized in this study. Based on the defined construct and content domains of the Framework of Self-Advocacy for Students with Disabilities (Test, Fowler, Wood et al., 2005), items were developed and revised through content, respondent, internal structure, and construct evidence of validity processes. Evidence from the self-advocacy literature, expert reviews, and cognitive interviews were utilized to develop the items and overall scale. Data were collected during the validation phase of this study from parents of students with ADHD in two large counties consisting of a mix of urban, suburban, and rural areas.

Phase 1: Development of the Self-Advocacy Measure for Youth (SAMY)

Procedures. Creating this measure began with specifying the purpose for the instrument, followed by identifying the content to be assessed by the measure, and then drafting items hypothesized to adequately represent this content (Crocker & Algina, 1986). Subsequently, items underwent reviews and modifications to provide additional evidence of construct and respondent processes validity. This section describes the steps that occurred to create the final version of the SAMY utilized in Phase 2 of this study.

Content blueprint and initial item development. The purpose of the instrument is to measure the global construct of self-advocacy in youth with disabilities. Researchers

have previously synthesized the literature defining self-advocacy skills and considered input from experts in the field of self-advocacy to create the framework of self-advocacy skills for students with disabilities (Test, Fowler, Wood et al., 2005). This framework conceptualizes self-advocacy as several unique skills that, in sum, determine how well a student with a disability advocates for himself or herself. This definition informed the primarily formative measurement model (Cenfetelli & Bassellier, 2009) utilized to guide the creation of items for the SAMY (see Figure 3). Each item represents a unique skill that contributes to the corresponding subconstruct (knowledge of self, knowledge of rights, communication skills, and leadership skills) as conceptually defined by the framework, and the items were organized to follow the hypothesized developmental sequence of self-advocacy skill attainment (Malian & Nevin, 2002).

Although reflective models, in which changes in the latent construct reflect changes in the indicators or items included in the measure, are more commonly used in the field of psychology (Coltman, Devinney, Midgley, & Venaik, 2008), this model is not the most appropriate conceptualization of the construct of self-advocacy. According to Coltman and colleagues (2008), several theoretical factors should be considered when deciphering whether a reflective or formative model is appropriate. First, in a formative model, the latent construct is formed from the composite of the skills within the construct, rather than existing independently. Applied to self-advocacy, the skills of understanding one's self, understanding one's rights, communicating this understanding, and engaging in leadership skills form the latent construct of self-advocacy. The whole

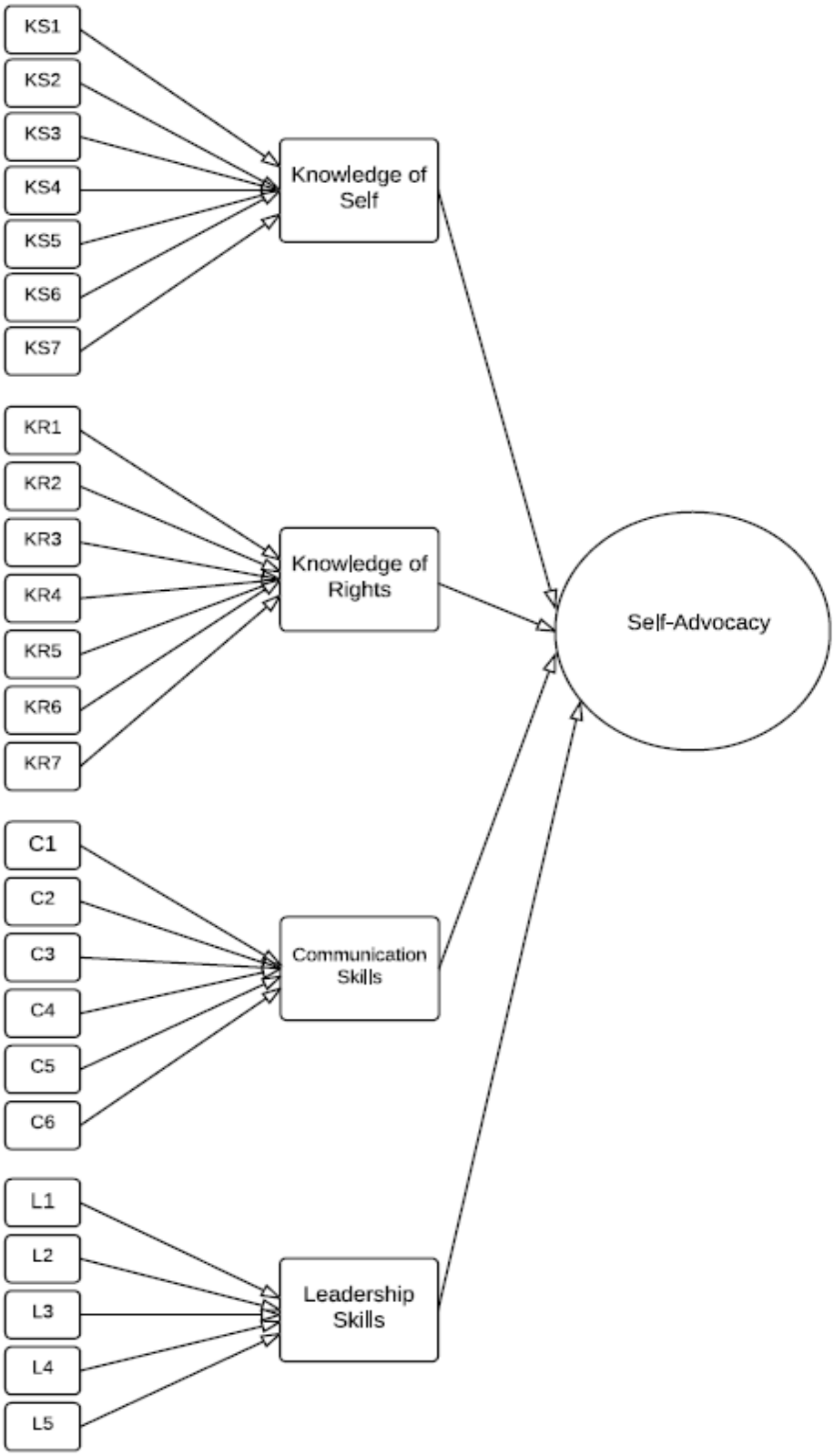

Figure 3. Formative Model of the Self-Advocacy Measure for Youth

picture of self-advocacy is incomplete if one or more of these indicators is removed. Second, the direction of causality must be considered. Self-advocacy is a broad construct which is theorized to increase as a whole as an individual's specific skills that make up self-advocacy develop. In other words, the primary direction of causation is that changes in the indicators lead to changes in the overall latent construct. Third, the relationship of the indicators within the construct must be considered. In a reflective model, the indicators are theorized to be highly related and, therefore, interchangeable; whereas, in the formative model, the items may have some commonality, but each item has at least some uniqueness and could be completely independent. As a result, items are not interchangeable and removing an item would change the formation of the overall construct. Indicators within each subconstruct of self-advocacy are conceptualized to be unique indicators of the subconstruct, and each subconstruct contributes distinctively to the latent construct of self-advocacy. Although the construct of self-advocacy is theorized as primarily a formative measurement model, it should be noted that reflective measurement characteristics are present as well. In particular, the fact that a unilateral construct is being measured infers that all of the items will have at least some underlying relationship between them. Furthermore, the causal relationship likely works in both directions in that changes in each indicator cause change in the latent construct as well as changes in the latent construct may lead to changes in the indicator measured. For example, the formative model implies that when a youth develops the leadership skill of negotiating change on behalf of the group of people with ADHD, this causes a change in the subconstruct of leadership skills and broad construct of self-advocacy; however, a

youth that develops overall leadership skills may also improve his or her specific ability to negotiate on behalf of the whole group.

Considering that all three of these theoretical characteristics primarily favor the formative model, this conceptualization of self-advocacy was utilized to generate the initial pool of items for each of the four subconstructs included in the SAMY (see Appendix A). The first version included a 5-point response scale for the instrument that reflected criterion-referenced levels of proficiency. Respondents were to indicate how well the skill is demonstrated by the student on a scale of 1 to 5. The scoring rubric provided for all of the items on the scale in order to increase respondent scoring reliability was as follows: 1= not at all; 2 = partially or inconsistently given assistance or prompting; 3 = partially or is beginning to complete the task inconsistently without assistance; 4 = mostly, most of the time completes the task independently; 5 = mastery, consistently engages in the task independently). This scale allowed for varying degrees of skill to be indicated. The first version of the SAMY included 30 items: eight within the Knowledge of Self subconstruct, seven within the Knowledge of Rights subconstruct, eight within the Communication Skills subconstruct, and seven within the Leadership Skills subconstruct.

Item revision through expert review. The next step involved asking persons with expertise in the areas of child development, education, and measurement to volunteer to review and provide feedback regarding the first version of the SAMY. An elementary school educator with more than 10 years of experience working with children with ADHD; a graduate school professor with more than 30 years' experience teaching child development, working with students with disabilities, and instructing those who teach

and intervene with these children; and a peer group of advanced measurement graduate students were asked to review the SAMY items for appropriate content, relation of each item to the subconstruct and total construct, and interpretability by potential parent and teacher respondents.

The expert reviewers served as a means of gathering evidence of content and construct validity of the items and corresponding scoring rubrics. Each expert was provided with a current draft of the SAMY and asked to provide written feedback regarding each item and the overall measure. Reviewers indicated whether the content of each item fit appropriately within the subconstruct and overall measure, specified syntax that needing improvement, and provided suggestions for item and full scale improvements. Subsequent conversations utilizing both structured and open-ended questions were held between the developer and each expert to clarify any written comments.

A major change resulting from the expert reviews was a conversion from having the one response scale key for the overall measure to providing a 1-5 response scale with response choice descriptions for each item. Experts indicated that having a scale specific for each item would likely facilitate increased comprehension of the intended skill measured by the item and improved consistency in responses. Additionally, a few items were removed that did not appear to add a unique skill to the subconstruct, sequential order of some items was changed, and the content of some items was modified to better reflect the developmental sequence and overall conceptualization of self-advocacy. Furthermore, wording changes were made to most of the item prompts to improve readability and interpretability for respondents. Finally, a heading for the scale was

added to collect demographic data from respondents. A revised version of the SAMY was created that incorporated the written and oral feedback (see Appendix B). This second version included 25 items: seven within the Knowledge of Self subconstruct, seven within the Knowledge of Rights subconstruct, six within the Communication Skills subconstruct, and five within the Leadership Skills subconstruct.

Item revision through cognitive interviews. The next step in the scale development process involved cognitive interviewing (Willis, 1999), which served to provide additional evidence of construct and respondent processes validity. Cognitive interviews were utilized to assess the readability and interpretability of items and the scoring rubric from the perspectives of potential respondents. The primary investigator served as the cognitive interviewer with skills in the appraisal of similar measures, knowledge about the construct, and training in the specific cognitive interviewing techniques utilized. According to Willis (1999), cognitive interviewees should be recruited from the possible subpopulations that will be completing the SAMY in the future. Subpopulations for the initial validation study included parents/guardians of elementary school students with ADHD. However, because future investigations are likely to include gathering validity evidence for using the SAMY with parents of students with ADHD in middle school and high school levels, as well as teachers across all three school levels, cognitive interviewees were a purposeful sample of one parent and one teacher of youth with reported diagnoses of ADHD in each of the three school levels for a total of six interviewees. Additionally, interviewees were sought who were from or who taught students from diverse backgrounds. A summary of demographic characteristics of the cognitive interviewees is provided in Table 1.

Table 1

Cognitive Interviewee Demographics

Interviewee	Role	Related School level	Additional Demographics
1	Teacher	Elementary	Works with students from lower SES and diverse racial/ethnic backgrounds
2	Parent	Elementary	White, moderate SES
3	Teacher	Middle School	Works with students from all SES and diverse racial/ethnic backgrounds
4	Parent	Middle School	Black/African American, moderately low SES
5	Teacher	High School	Works with students from all SES and diverse racial/ethnic backgrounds
6	Parent	High School	White, low SES

Note. SES= Socioeconomic status

Each participant was given an explanation of the cognitive interviewing process and assurance that their responses would be used solely to further develop the instrument. Each interviewee responded to a series of concurrent verbal probes regarding their interpretations of and feelings about each item and corresponding scale. Several probes were scripted, while spontaneous probes were used as necessary to further clarify the interviewee's responses. After each question, interviewees were asked to paraphrase what the question meant and how they came to the response chosen. If the interviewee's understanding of the item differed from the intended concept, the interviewer verbally explained the concept and asked the interviewee for suggested wording that would be clearer. Next, the interviewee was asked to provide feedback regarding the clarity of the

response scale for the item. The interviewer further probed for suggested word changes as appropriate. At the end of each subscale, the interviewer asked the interviewee for any additional feedback for that subscale. Finally, the respondents were asked to provide feedback regarding the directions provided for completing the SAMY and their perceptions of the overall measure.

Information obtained from the cognitive interviews resulted in the content and sequence of the items remaining relatively unchanged. However, revisions were made to the item prompts, scoring rubrics for each item, and directions for the overall measure based on feedback provided by the interviewees. Modifications aimed to improve interpretability by respondents while maintaining content validity. Lastly, additional changes to the demographics heading were made. This third and final version included seven items in the Knowledge of Self subscale, seven items in the Knowledge of Rights subscale, six items in the Communication Skills subscale, and five items in the Leadership Skills subscale, for a total of 25 items (see Appendix C). This version of the SAMY was utilized for the initial validation study.

Phase 2: Initial Validation Study

Participants. Information regarding the population from which the sample was selected, inclusion and exclusion criteria, and strategies utilized to recruit participants are described. The resulting participant demographics are reported.

Sample selection. The sample for this study was recruited from two large counties with racial, ethnic, and social-economic diversity located in the southeastern United States. The public school district within each county as well as a large university pediatric health clinic system distributed flyers to parents of students identified as having

ADHD living in these two counties. Publicly distributed demographic data indicated that each county included urban, suburban and rural communities. Between 50-60% of youth attending public school in these counties were classified as economically disadvantaged. Two thirds of students in County A were identified as African-American or Hispanic and one third of students in County B were identified as minority race/ethnicity. Based on public census data available on each county's website, approximately 26% of the population in County A identified themselves as Hispanic, 17% as Black/African-American, and 49% as Non-Hispanic White. In County B, 13% of the population identified themselves Hispanic, 5% as Black/African-American, and 77% as Non-Hispanic White. According to the United States Institute for Educational Sciences National Center for Education Statistics (2013), County A was one of the largest counties in the state and included one of the ten largest school districts in the country. County B was moderately sized with the public school district listed in the top 100 largest in the country. The university clinics were all affiliated with the university for which the primary researcher worked. The clinics are located in urban areas of county A. Families served by the clinics resided in both County A and B, with the majority residing in County A, fall into all SES levels, and have both private and state-funded insurance. The diversity across these counties and recruitment locations was sought to facilitate greater diversity within the sample and, therefore, increased external validity of results.

The number of participants sought was based on several factors. MacCallum, Widaman, Zhang, and Hong (1999) provide evidence for considering the combined effect that sampling method, communality between variables, and variable to factor ratios has on achieving an adequate sample size to sufficiently reduce the error on loadings in factor

analysis. Given the moderate communality expected between variables due to the formative model represented by the self-advocacy construct, the convenience sampling method used in this study, and the moderate to high overdetermination predicted, a sample size that results in an N to p ratio of between 3 and 6 was recommended (Cenfetelli & Bassellier, 2009; MacCallum et al., 1999). Although an N:p ratio of approximately 3 may result in increased error, the fact that each subscale analyzed included between 5 and 7 items was predicted to have a counter positive effect of reducing error. Thus, the goal was to recruit at least three times the number of participants as the number of items included in the scale, which equated to 75 parents/guardians of elementary students with reported ADHD.

Inclusion and exclusion criteria. In order to be eligible to participate in the validation study, the parent or guardian had to have a child with a reported diagnosis of ADHD and a current 504 Plan or IEP written to address the impairments associated with the ADHD diagnosis. Having an IEP or a 504 Plan indicated that the student's ADHD contributed to significant functional impairments that meet the criteria of having a disability. This level of impairment supports the need for the development of self-advocacy skills to counter and overcome the impairments. Their children had to be enrolled in elementary school, which included students attending Kindergarten through those that had recently completed fifth grade. Students were required to have a reported diagnosis of ADHD for at least one year in order to be included in the study. The diagnosis of ADHD was confirmed by two sources: school/clinic report of a diagnosis of ADHD in the student's cumulative/medical record and parent report. The requirement of

having the diagnosis for at least one year ensured a period of time in which the student could begin to acquire self-advocacy skills after the initial diagnosis.

Because this study was designed to provide preliminary validity evidence for use of the SAMY to understand students' self-advocacy related to their ADHD diagnosis, students with additional diagnoses that are generally considered the primary diagnosis were excluded. Excluding these diagnoses aimed to increase the likelihood that the self-advocacy skills assessed were related to the students' ADHD. Diagnoses excluded were students with significant cognitive impairments (indicated by Intellectually Disabled-Mild, Moderate, or Severe/Profound diagnoses), multiple significant impairments (indicated as Developmentally Delayed), Autism Spectrum Disorders, and other health impairments that have high correlations with significant overall impairment (such as seizure disorders and cerebral palsy). Participants with diagnoses that are typically considered comorbid or secondary to ADHD, such as Oppositional Defiant Disorder, an anxiety disorder, or a learning disability were included. These diagnoses have high comorbidity rates with ADHD (AAP, 2011) and inclusion was intended to provide evidence of external validity for use with students with these comorbid disorders in school and clinical settings. Because ADHD itself is not an eligibility category for an IEP, youth may have had an IEP based on the eligibility category of Other Health Impairment or their comorbid disorder, such as Specific Learning Disability, Speech/Language Impaired, etc. Students with other health impairments that are not indicated to significantly impair overall functioning, such as asthma, also were included. Screening for additional diagnoses occurred in two stages. First, the designated school employee or clinic personnel assisting with recruitment at each school or clinic was

provided with a list of comorbid diagnoses that would exclude the student from study participation. They were instructed to exclude students with these diagnoses from receiving a flyer. Second, all potential participants who responded to the recruitment flyer completed a brief eligibility screening (Appendix D) with the primary investigator that specifically asked about each inclusion criterion.

Recruitment. Approval for this study was obtained from both the University of South Florida (USF) Institutional Review Board (IRB; see Appendix E) and each of the participating school districts' research review processes. Parents and guardians of youth with ADHD were recruited for the validation study using convenience sampling. First, the Student Support Services (SSS) office of the public school district in each county was the designated liaison between study personnel and recruiting schools willing to participate in the study. These offices helped acquire volunteer school level personnel (e.g., school psychologist, counselor, 504 Coordinator, etc.) to assist with recruitment at each school and contacting principals to obtain support for study participant recruitment to occur through their respective schools. The first wave of recruitment during spring of the school year garnered four elementary school support staff willing to volunteer to help recruit participants from four schools in County A and two schools in County B. Qualitative discussions with support staff who did not volunteer revealed three main responses for a low volunteer response rate: 1) staff feeling overwhelmed by current job responsibilities and district initiates, 2) timing of the study as priorities in the spring are focused on end of year assessment preparation and administration, and 3) challenges receiving information about the study that would have increased volunteer response rate,

such as the sole communication from the SSS office in County A asking for volunteers omitting information about the time requirement of one hour or less for volunteers.

Next, the principal of each of these schools received a principal support letter (Appendix F) that explained the rationale for the study, described procedures for the study, and asked for support from the principal to recruit participants through his or her school. Principals were informed that if they allowed recruitment to occur through their schools, then they would be provided with results of the study upon completion. Of the six potential schools, all principals agreed for recruitment to occur through their schools. Subsequently, the designated school level personnel identified all of the students with reported diagnoses of ADHD who had an IEP or a 504 Plan at their respective schools. They cross-checked these lists with the inclusion and exclusion criteria, and a paper recruitment flyer was sent home to the parents of all students who appeared to meet criteria.

Given an estimated number of 5% of students at each school meeting study inclusion criteria (or approximately 20 students), and a predicted flyer response rate of about 20%, the goal was to obtain support from at least 20 elementary schools across the two counties in order to reach the minimum necessary number of parent/guardian participants. Since the initial wave of school recruitment fell well short of this goal, modifications were made to study procedures in order to obtain more participants. The first change was to remove teacher participants from the study. The original study design included requesting a teacher of each child whose parent participated in the study to also complete the online measures in order to provide additional evidence of validity through multitrait-multimethod analyses. By eliminating teacher participants, the intention was to

reduce the perceived burden of time and resources for school staff. Subsequently, County B agreed to a second wave of requests for school level volunteers. This wave occurred during the fall of the following school year in an attempt to take place during a less busy time of the school year and involved the primary investigator talking directly to student services staff about the study in order to obtain volunteers. Five school staff volunteered to assist with recruitment at seven schools (two volunteers worked at two elementary schools). The same procedures as the first wave were followed to obtain principal support, which resulted in six more schools included in the study (one principal declined to participate).

Second, study procedures were modified and approved to recruit participants through clinics affiliated with a large university healthcare system. Attending pediatricians, psychiatrists, psychologists, and residents who worked with elementary students with ADHD in clinics across the university healthcare system were sought to assist with study recruitment utilizing agency email announcements, dissemination of the study recruitment flyer at the clinics, and personal contacts within the university. The clinic personnel served the same role as designated school personnel by identifying elementary students with reported diagnoses of ADHD who were seen in their clinic during the recruitment period, and verbally checking inclusion and exclusion criteria prior to providing a recruitment flyer to the child's parent or guardian. The flyer provided preliminary information about the study and requested interested parents to contact the principal investigator to determine eligibility. Additionally, potential participants recruited through the clinic could indicate that they preferred to be contacted by study personnel, provide contact information on the flyer, and have the flyer submitted

to study personnel by the recruiting clinic personnel. The primary investigator completed a SAMY Eligibility Screener with each potential participant by phone or in person. Data regarding how participants received the study flyer (school versus clinic) were collected during the screening. Recruitment method and eligibility results are reported in Table 2.

Table 2
Participant Recruitment Results by Location

Location	Flyers Distributed	No. Screened	No. Qualified
County A Schools			
Spring 2014 (4 schools)	87	10	10
County B Schools			
Spring 2014 (2 schools)	87	3	3
Fall 2014 (6 schools)	160	5	4
Clinics	--	81	72
Total Across Locations	>334	99	89

Note: Number of flyers distributed by clinic personnel was not tracked.

Parents of youth identified as having ADHD who met eligibility criteria and provided verbal consent to participate were provided study materials. Parents were given the options of receiving materials electronically via an online link, paper materials delivered via postal mail, or paper materials handed to them in person. Providing all three options allowed for inclusion of a wider range of participants. Research has demonstrated that on-line and paper informed consent are similarly effective (Varnhagen et al., 2005) and steps can be taken in order to meet ethical guidelines regardless of the format (Keller & Lee, 2003).

Participants who returned completed study materials by the due date were automatically sent a $2 gift certificate through the method they indicated during study participant screening (either an e-card or a gift card was mailed). They were also entered into a drawing for one of two $50 gift cards held at the end of the study. These

reinforcements were considered sufficient to improve study participation and completion rates, while remaining small enough to avoid enticing false participation or unduly persuade participation in the study. Recruitment and eligibility determination occurred for approximately 10 months.

Participant demographics. Eighty-nine parents/guardians of elementary school age youth acknowledged as having ADHD qualified to participate in the study. Seventy-six of those that qualified completed the study materials, of which 14 were recruited from schools and 62 were recruited from clinics. Table 3 includes demographic information participants provided about their child identified as having ADHD. The youth rated by the respondents were between the ages of 5 and 12 years old (M= 8.99, SD = 1.79). Approximately 82% of youth were male, which is slightly higher than the estimated gender ratio of 3:1 males to females diagnosed with ADHD in the general population (Barkley, 2006). Respondents indicated that almost half of the youth had a Section 504 Plan and the remaining youth had an IEP. With 21% of the youth described as Hispanic, ethnic diversity within the sample was similar to the average census data reported for the two counties included in the study (26% in County A, 13% in County B). Racial diversity was slightly greater than that reported in the population for these counties, with approximately half of the youth in the study described as Black/African American, Asian, or Multi Racial.

Measures. Three measures were used during the validation phase of this study. A description of each measure is provided.

SAMY Eligibility Screener. This researcher developed participant screening form was used to determine eligibility (see Appendix D). When an interested parent or

guardian responded to the recruitment flyer, the primary investigator asked five questions that aligned with the inclusion and exclusion criteria identified for participation in this

Table 3

Demographics of Elementary Age Youth with ADHD Included in the SAMY study (n=76)

Characteristic	Category	No.
Recruitment Location	Schools	14
	Clinics	62
Type of School Plan	IEP	41
	504	35
Gender	Male	62
	Female	14
Grade	Kindergarten	4
	First	10
	Second	9
	Third	20
	Fourth	14
	Fifth	19
Ethnicity	Not Hispanic/Latino	49
	Hispanic/Latino	16
	Unknown/Prefer not to answer	11
Race	Black/African American	31
	White	31
	Other (American Indian/Alaskan Native, Asian, Native Hawaiian/Pacific Islander)	1
	Multiracial	5
	Unknown/Prefer not to answer	8

Note. Youth demographic information provided by parent/guardian respondents.

study. Data regarding whether the child has an IEP or a 504 Plan were collected. When eligibility criteria were met, the investigator explained the procedures for the study and inquired as to whether the parent would like to participate. Information regarding what

method (on-line, paper or in person) the parent would like to use to complete study materials was also collected on this form.

Self-Advocacy Measure for Youth (SAMY). Phase I of this study developed the SAMY utilized in Phase 2 of this study (see Appendix C). The SAMY assesses the four subconstructs that make up the global construct of self-advocacy: knowledge of self, knowledge of rights, communication skills, and leadership skills. Respondents indicate students' criterion-referenced levels of proficiency using a 5-point response scale specific to each item. Evidence of reliability and validity of score interpretation as an indication of the overall self-advocacy skills for youth in elementary school diagnosed with ADHD was gathered during Phase 2 of this study.

American Institutes for Research Self-Determination Scale- Research Form (AIR). Respondents also completed an AIR (Wolman et al., 1994; see Appendix G). The AIR Self-Determination Scale was selected as an accompanying measure for cross-structural analyses of the SAMY for several reasons. First, the AIR is the only known self-determination measure that has been previously validated for use across the age range targeted for this study. Second, when the operationalized definition of self-determination utilized to construct the AIR was compared to the definition of self-advocacy utilized to develop the SAMY, some commonality in skills assessed existed; however, unique skills are also measured. As a result, the AIR scale was theorized to provide evidence of discriminant validity for the SAMY. Finally, the Research Form of the AIR was chosen because the items are the same as the items in the Educator Form, which is the only form with sufficient psychometric support for use with youth across the school ages included in this study and for completion by parents.

The AIR was developed to assess the global construct of self-determination, which the authors defined as the processes and opportunities through which someone becomes self-determined (Shogren et al., 2008). The processes, or one's self-determination capacity, are broken down into three subconstructs: knowledge of self-determination behaviors, ability to perform self-determination behaviors, and perception of knowledge and ability to perform self-determination behaviors (Wolman et al., 1994). Opportunity is divided into two subconstructs: opportunity to perform self-determination behaviors at school, and opportunity to perform self-determination behaviors at home. Both the Educator and Research Forms of the AIR include these subconstructs as five subscales. Each subscale includes six Likert-scale items for a total of 30 items on the AIR. The scale used to indicate the student's ability on each item is as follows: 1 = never, 2 = almost never, 3 = sometimes, 4 = almost always, and 5 = always.

An initial field test using the preliminary AIR Educator Form with 450 students with and without disabilities ages 6 - 25 years old provided evidence of reliability and validity of interpreting scores with this population (Wolman et al., 1994). Reliability evidence was indicated through alternative-item correlation (.91 to .98), split-half test (.95), and test-retest (.74) to demonstrate consistency over time. Support for internal consistency was demonstrated with a Cronbach's alpha of .95 for the total scale.

Procedures. The following section describes the data collection, data entry, and statistical analyses procedures conducted. Statistical analyses are provided in sequential order. Approval for this study was obtained from both the University of South Florida (USF) Institutional Review Board (IRB) and each of the participating school districts' research review processes. Ethical issues related to human subject participation were

addressed by following all regulations within the University of South Florida IRB process. Particular emphasis was given to ensuring that parents understood the potential risks, which were deemed minimal, and benefits of participating in the study prior to consent.

Data collection. Parents or guardians of youth with ADHD who were eligible to participate in the study based on the screening and gave verbal consent to participate were provided SAMY study materials. Based on the preference stated during the phone screening, the participant was emailed a link to the materials online, sent paper materials by postal mail, or handed paper materials by study personnel at their clinic appointment. Each participant received: 1) instructions to assist with completing the materials; 2) a Participant Consent Form summarizing the study and informed consent for participation in the study (Appendices H, I); 3) a SAMY; and 4) an AIR Research Form. Participants who chose to receive the study materials by mail also received a postage-paid return envelope. The on-line link was a Google Drive document that instructed participants through the materials step by step. Data collection ran concurrently with recruitment in that once a parent agreed to participate, they were sent study materials within a week. A reminder email/phone call was given to participants for whom materials had not yet been received approximately two days before the due date for on-line responses and one week before the due date for mailed responses. Each participant was provided a participant code to enter in the on-line form instead of a name in order to track receipt of materials while maintaining confidentiality. The code was written on paper materials that were mailed or handed to participants. Incomplete materials were deterred through several mechanisms. Instructions provided at the beginning of all response methods reminded the

respondent to complete all items. Additionally, online submission settings prompted a response an item before continuing, while the participant retained the right to submit the form as incomplete or discontinue participation at any time. Finally, materials completed in person were scanned by study personnel for missing data and respondents were encouraged to complete any missing items before final submission. Data regarding completion rates for each method was collected and is reported in Table 4.

Table 4

Participant Response Method Results by Recruitment Location

Method & Location	No. Distributed	No. Returned	Total % Received
Postal Mail			
County A	2	2	100.00
County B	0		
Clinic	0		
Email			
County A	8	8	100.00
County B	7	4	57.14
Clinic	41	33	80.49
In person			
Clinic	31	29	93.54
Total	89	76	85.39

Twenty percent of respondents were asked to complete a second SAMY for the test-retest reliability analyses. Systematic random sampling was used by sending a second SAMY to each 5th respondent that returned a completed SAMY in the first round of data collection using the same method the participant chose for the first round. This form was sent to participants approximately 2-4 weeks after the initial response packet was received, and respondents were given a reminder using the same procedures as the first round. If one of the retest participants did not respond, then the next participant who

completed the initial study materials (e.g., 6th respondent) was contacted to participate in the test-retest round using the same procedures. Test-retest participants received a new participant number that included the original participant number proceed by a 2 in order to differentiate first round forms from second round forms. All participants who completed the second SAMY received a $5 gift card for their participation. The gift card was sent to the participant using the same method the participant chose in the first round. Fifteen participants who completed the first round of the SAMY study also completed the second round measure.

Data entry. An Excel database was used to track all information received. Data from participants who completed the Google Forms© on-line version of the measures were automatically converted by Google Drive© into an excel spreadsheet with password protection. The primary investigator scanned all paper returned SAMY forms to determine missing data. Due to the fact that the SAMY represents a primarily formative model in which items are not interchangeable, missing items would negatively inhibit the ability to interpret a student's skills appropriately. As a result, any participant that returned a SAMY form missing one or more item responses would have been excluded from data analyses; however, no measures were missing data.

Paper completed materials were entered manually by the primary investigator. A member of the study team who had completed IRB researcher requirements used systematic random sampling by checking every 8th paper participant entry. If an error had been found in a data entry row, then the lines before and after that row would also have been checked for accuracy. No errors were found.

Statistical analyses. Methods to obtain initial reliability and validity evidence for use of the SAMY with youth with ADHD are described in terms of the steps that were taken. Statistical Package for the Social Sciences 22.0 (SPSS) was used for all statistical analyses. Descriptive data were calculated for the total score and each item, including number of participants, mean, standard deviation, skewness, and kurtosis.

Total scale internal consistency. Internal consistency of the total score was measured using Cronbach's alpha. This analysis allowed the investigator to determine the relationships between items within the SAMY (Standards, 2014). Typically, a Cronbach's alpha higher than .8 is sought for the total scale in order to comply with widely accepted guidelines for high internal consistency (Crocker & Algina, 1986), and scores higher than .7 are considered acceptable. Additionally, item-total statistics were used to gather evidence of internal consistency and item discrimination. The corrected item-total correlation assessed the degree to which the score for one item related to the scores for the other items in the scale. A high value indicated strong internal consistency of that item with the combined scores of the remaining items. The Cronbach's alpha if item deleted calculated how internal consistency for a scale would increase or decrease if a particular item were removed from the scale. Based on these statistics, each item was analyzed to determine if it positively contributed to the consistency of the overall scale. The utilization of a primarily formative model in developing the SAMY was taken into consideration when analyzing the Cronbach's alpha and determining if items may need to be changed or removed. The premise is that items in this measure would have some commonality in that they all relate to the construct of self-advocacy, but that the uniqueness of each item is greater in a formative model than in a reflective model of

measurement because the items are unique indicators of the construct. Priority in determining whether to keep, change, or delete an item was given to the content that items added to the self-advocacy construct being measured rather than the consistency of the measure. Therefore, items that appeared to be taking away from the consistency of the overall scale based on corrected item-total correlation and change in Cronbach's alpha if item deleted columns were reviewed for possible modifications, rather than automatically removed.

Principal components analysis (PCA). The data reduction method of principal components analysis was used to evaluate internal structure and construct validity evidence of the SAMY. Exploratory analysis of how the indicators function in the principal components explains the maximum amount of variance in the data (Fabrigar, Wegener, MacCallum, & Strahan, 1999). Several techniques were undertaken to gather evidence to support the number of components included in the model of self-advocacy, including Kaiser's criterion of eigenvalues greater than one, visual scree plot analysis, and parallel analysis. A promax rotation was used because the items were theorized to relate in that they are all representative of the construct of self-advocacy. Both the results of these statistical techniques and the conceptual framework represented were considered in the interpretation of the number of factors represented by the items in the SAMY.

Subscale internal consistency. Next, the internal consistency of each subscale was measured. Similar to the total scale analysis, Cronbach's alpha for each subscale was interpreted in light of the formative measurement model. Based on the corrected item-total correlation and Cronbach's alpha if item deleted, each item was analyzed to determine if it was adding to or taking away from the consistency of the subscale in

which it was included. The investigator considered both content contribution and the amount of impact that an item negatively contributed to Cronbach's alpha in order to determine if the item should be modified or removed.

Additional construct validity analyses. Evidence of discriminant validity was gathered by comparing parent reported traits of self-advocacy and self-determination. A paired samples *t*-test was utilized to determine if a significant difference existed between the total scale scores the youth obtained from their caregivers on the SAMY compared to on the AIR. The prediction was that these scores would not significantly differ. Also, a Pearson product moment correlation analyzed the relationship between scores the youth obtained on these two scales. The expectation was that if the SAMY is assessing self-advocacy as intended, then the two traits should not correlate highly. The hypothesis was that a moderate correlation would exist due to the two traits measured having some commonality while remaining distinct constructs. This finding would provide evidence of discriminant construct validity.

*Additional reliability analyses***.** Test-retest reliability was calculated for the respondents for which two rounds of forms were collected approximately two to four weeks apart from each other. Test-retest is important because it allows the analysis of variances in respondents across time periods (Standards, 2014). The Pearson product moment correlation was utilized to determine how consistently students' levels of self-advocacy were indicated across the two response periods for the SAMY Total Scale and subscale scores.

Analyses of self-advocacy skill levels across samples. The final research question explored for this study was regarding the extent to which elementary school students with

ADHD exhibit self-advocacy skills. This question was explored through several mechanisms. First, scores obtained from respondents recruited through schools were compared to those recruited through clinics to determine if statistically significant differences existed between these samples using the nonparametric Mann-Whitney test. This procedure was utilized due to the unbalanced number of participants included in the two comparison groups. Second, an independent *t*-test analysis was conducted to compare mean total and subtest scores for students with an IEP to students with a Section 504 Plan to determine whether these two groups of youth were indicated to demonstrate significantly different self-advocacy skills. Finally, the mean total score and mean subscale scores on the SAMY for students in two school levels were compared. Due to the small number of participants within each grade level, self-advocacy skills for youth in elementary school were analyzed by combining participants in grades K-2 to form a lower elementary school level and grades 3-5 to form an upper elementary school level. An independent *t*-test determined if a statistically significant difference existed between the Total Scale scores for students in grades K-2 compared to students in grades 3-5. A point-biserial correlation provided evidence as to whether there was a significant relationship between the dichotomous variable of school level and the continuous variable of overall self-advocacy skills based on the SAMY Total Scale scores. A boxplot visually represents the relationship between school level and total score on the SAMY. Similarly, correlations between school level and each of the four subscales included in the SAMY were conducted to discern the relationships between these variables.

CHAPTER FOUR

Results

The primary purpose of this study was to develop a measure of youth's self-advocacy skills based on teacher and caregiver perceptions of these skills in youth. Chapter Three provided detailed information regarding the development of the SAMY from theoretical construct conceptualization through item and measure revisions. The second purpose of this study was to provide preliminary empirical data to support the validity and reliability of score interpretation for youth with ADHD in elementary school. This chapter describes the data gathered to provide evidence related to each of the research questions based on parent/caregiver reports of self-advocacy skills demonstrated by elementary school youth identified as having ADHD. Results of statistical analyses related to each research question are described in the following order: item characteristics, evidence of reliability, results of principal components analysis, additional construct validity evidence, and initial findings related to self-advocacy skills in elementary school youth identified as having ADHD.

Research Question 1: What items best assess the construct of self-advocacy skills in youth with ADHD at the elementary school level?

Initial evidence supporting which items are best suited to be included in the measurement of self-advocacy skills is provided here through descriptions of item characteristics. Additional statistical information related to this research question is presented through analyses of reliability and validity under research questions two through four.

Item, subscale, and scale characteristics. Descriptive statistics were calculated for each item within the measure, each subscale, and the SAMY total score, including mean, standard deviation, skewness, and kurtosis (see Table 5). Most items demonstrated relatively symmetrical and normal distribution of scores around the mean with skewness and kurtosis values between -1.00 and +1.00. Several items revealed slight skewness and/or kurtosis with values between -2.0 and -1.0 or +1.0 and +2.0. Items KR1, KR5, KR6, KR7, L3, and L5 demonstrated considerable positive skew with scores greater than +2.0, indicating that most scores were on the low end of the scale (score of 1) with some outliers on the higher end of the scale (score of 5). The same six items as well as items L2 and L4 demonstrated considerable positive kurtosis, indicating that median scores yielded a peaked distribution. Items with considerable skew and kurtosis are further discussed in light of the theoretical framework in Chapter Five.

Skewness and kurtosis for the Knowledge of Self (0.37 and -0.54) and Communication Skills (0.66 and .021) subscales were between -1.00 and +1.00, indicating that the scores were essentially symmetrical and normally distributed around the mean. These characteristics for the Leadership Skills subscale demonstrated a slight positive skew (1.34) and positive kurtosis (1.42) to the scores. The Knowledge of Rights subscale demonstrated a positive skew (1.86), indicating that scores centered somewhat to the lower score side of the mean with a few outlying subscale total scores that were significantly higher than most, and a considerable positive kurtosis (3.81), indicating that the median score created a somewhat peaked distribution. Because the number of items in each subscale varied, mean scores of the items within each subscale were calculated by dividing the subscale total scores by the number of items within each subscale. This

Table 5

SAMY Item, Subscale, and Total Scale Characteristics

Scale/Item	*M*	*SD*	Skewness	Kurtosis
KS1	2.38	1.35	0.48	-0.84
KS2	2.70	1.45	0.23	-1.27
KS3	2.51	1.36	0.30	-1.25
KS4	2.17	1.14	0.55	-0.89
KS5	2.05	1.07	0.70	-0.22
KS6	2.59	1.40	0.35	-1.11
KS7	2.72	1.33	0.28	-1.04
KR1	1.43	0.82	2.29	5.61
KR2	1.72	1.03	1.49	1.68
KR3	2.00	1.18	0.91	-0.36
KR4	1.75	1.07	1.39	1.11
KR5	1.63	1.11	2.06	3.62
KR6	1.30	0.69	3.21	12.64
KR7	1.45	0.87	2.10	4.13
C1	2.00	1.18	1.11	0.36
C2	1.87	1.21	1.31	0.61
C3	1.78	1.16	1.61	1.82
C4	2.47	1.37	0.49	-1.04
C5	2.82	1.41	0.25	-1.28
C6	2.70	1.33	0.30	-1.08
L1	2.84	1.59	0.29	-1.53
L2	1.65	1.03	1.67	2.14
L3	1.51	1.04	2.20	4.09
L4	1.50	0.92	1.81	2.66
L5	1.43	0.93	2.30	4.52
KS Total[a]	17.13	6.84	0.37	-0.54
KR Total[a]	11.29	5.18	1.86	3.81
C Total[b]	12.63	5.34	0.66	0.21
L Total[c]	8.93	4.39	1.34	1.42
SAMY Total[d]	50.99	18.27	1.03	1.22

Note. KS= Knowledge of Self, KR= Knowledge of Rights, C= Communication Skills, L= Leadership Skills; n = 76; Min = 1, Max = 5 for all items.

[a]Min = 7, Max possible = 35 for Knowledge of Self and Knowledge of Rights Subscales.

[b]Min = 6, Max possible = 30 for Communication Skills Subscale.

[c]Min = 5, Max possible = 25 for Leadership Skills Subscale.

[d]Min = 25, Max possible = 125 for SAMY Total Scale.

converted subscale mean was highest for the Communication Skills subscale (*M* = 2.72, *SD* = 0.45), with a similar mean for the Knowledge of Self subscale (*M* = 2.45, *SD* = 0.24). Scores of 2 typically indicate that students were rated as beginning to demonstrate a skill with assistance, while scores of 3 typically indicate students were beginning to demonstrate a skill without assistance. The converted mean for the Leadership Skills subscale (*M* = 1.78, *SD* = 0.59) fell somewhat below the aforementioned subscales, and the Knowledge of Rights subscale (*M* = 1.61, *SD* = 0.24) yielded the lowest converted mean. Scores of 1 indicate a skill is not yet demonstrated.

SAMY Total Scale scores (*M* = 50.99, *SD* = 18.27) indicated that the scores were relatively symmetrical and normally distributed (skewness and kurtosis = 1.03 and 1.22, respectively; Standards, 2014). Next, additional total scale, subscale, and individual item information is provided in terms of evidence to support consistency of score interpretations.

Research Question 2: To what extent are the scores from the Self-Advocacy Measure for Youth reliable for elementary students with ADHD?

Evidence of the consistency of scores is presented through analyses of the relationship of items within the total scale, relationship of items within each subscale, and stability of test-retest scores.

Total scale internal consistency. Cronbach's alpha analyses were utilized to provide information regarding the strength of the relationships between all of the items within the SAMY (Standards, 2014). Internal consistency reliability of the total score indicated a high level of intercorrelation (Cronbach's $\alpha = .93$). The inter-item correlation matrix indicated that all of the items in the scale positively correlated (see Table 6).

Based on the corrected item-total correlation and Cronbach's alpha if item deleted (see Table 7), removing one item (KS1) would slightly increase Cronbach's alpha by .001, while removing any other item would result in a slight decrease in the overall scale internal consistency. Therefore, none of the items would have a significant positive effect on the internal reliability of the total scale if removed. All of the corrected item-total correlation coefficients exceeded the generally accepted level of .3. Coefficients ranged between .36 and .73, providing evidence that all of the items moderately relate to the overall scale, all of the items provide some uniqueness to the overall scale, and none of the items have such high commonality to suggest it may need to be removed as it is not providing anything new to the scale.

Subscale internal consistency. Likewise, Cronbach's alpha was utilized to measure the internal consistency of the Knowledge of Self, Knowledge of Rights, Communication Skills, and Leadership Skills subscales. Cronbach's alpha for each scale indicated a fairly high level of intercorrelation between the items within each subconstruct (Cronbach's α = .87, .87, .79, and .84 respectively). Table 6 illustrates that all of the items in the Knowledge of Self, Knowledge of Rights, and Leadership Skills subscales demonstrated at least a moderate correlation of .30 with the other items located in the same subscale. Several items in the Communication Skills subscale demonstrated correlations below .30. The corrected item-total correlations shown in Table 7 were examined to determine if removing any of the items within each subscale would impact the internal consistency of the subscale. On the Knowledge of Self subscale, removing one item (KS1) would slightly increase reliability. None of the other items would have a positive effect on the internal consistency of the subscale if removed from its

Table 6

Inter-Item Correlation Coefficients

Item	KS1	KS2	KS3	KS4	KS5	KS6	KS7	KR1	KR2	KR3	KR4	KR5	KR6	KR7	C1	C2	C3	C4	C5	C6	L1	L2	L3	L4
KS1	1.00																							
KS2	**.42**	1.00																						
KS3	**.33**	**.71**	1.00																					
KS4	**.38**	**.56**	**.72**	1.00																				
KS5	**.34**	**.53**	**.57**	**.73**	1.00																			
KS6	**.37**	**.48**	**.37**	**.49**	**.61**	1.00																		
KS7	**.30**	**.38**	**.40**	**.48**	**.53**	**.77**	1.00																	
KR1	.11	.16	.07	.19	**.32**	.21	.14	1.00																
KR2	.11	.19	.18	.21	**.37**	**.49**	**.49**	**.43**	1.00															
KR3	.24	**.34**	**.44**	**.47**	**.42**	**.40**	**.32**	**.52**	**.44**	1.00														
KR4	.23	.21	**.35**	**.50**	**.52**	**.52**	**.48**	**.55**	**.54**	**.79**	1.00													
KR5	.14	.27	**.30**	**.30**	**.45**	**.35**	**.32**	**.49**	**.47**	**.39**	**.41**	1.00												
KR6	.12	.23	.24	.26	**.34**	.29	.29	**.49**	**.36**	**.43**	**.44**	**.62**	1.00											
KR7	.16	.26	.19	.25	**.38**	**.32**	.29	**.69**	**.42**	**.52**	**.56**	**.55**	**.77**	1.00										
C1	.23	.20	.29	**.39**	.29	**.32**	.22	**.41**	**.41**	**.48**	**.47**	**.41**	.26	**.35**	1.00									
C2	.06	.19	.24	.26	**.30**	**.40**	**.39**	**.33**	**.46**	.29	**.42**	**.46**	**.40**	**.42**	**.41**	1.00								
C3	.11	.21	.27	**.37**	**.33**	**.34**	**.31**	**.44**	**.47**	**.41**	**.57**	**.37**	**.45**	**.55**	**.54**	**.52**	1.00							
C4	.15	.22	.24	.29	**.37**	**.46**	**.41**	.28	.15	**.37**	**.43**	.12	.20	**.32**	*.13*	*.16*	**.39**	1.00						
C5	**.33**	**.30**	.36	**.38**	**.40**	**.48**	**.48**	.16	**.40**	**.39**	**.48**	.19	.14	.24	**.34**	*.14*	**.37**	**.51**	1.00					
C6	.28	.26	.23	.23	**.30**	**.46**	**.43**	.12	**.32**	.28	**.41**	.06	.12	.21	*.29*	*.20*	**.42**	**.50**	**.78**	1.00				
L1	.20	**.33**	**.33**	**.33**	**.40**	**.50**	**.38**	**.34**	**.46**	**.43**	**.47**	.29	.14	.26	**.61**	**.44**	**.53**	**.38**	**.54**	**.53**	1.00			
L2	.13	.24	**.32**	**.49**	**.51**	**.34**	**.38**	**.47**	.25	**.33**	**.41**	**.43**	**.30**	**.34**	**.54**	**.46**	**.48**	.14	**.30**	.27	**.61**	1.00		
L3	.12	**.36**	**.44**	**.54**	**.58**	**.36**	**.49**	.17	.20	.20	**.31**	**.42**	**.45**	**.39**	.28	**.43**	**.40**	.13	**.33**	**.31**	**.43**	**.72**	1.00	
L4	.22	**.39**	**.35**	**.35**	**.49**	**.55**	**.55**	**.36**	**.45**	**.43**	**.54**	**.53**	**.62**	**.64**	.27	**.43**	**.39**	.26	**.37**	**.36**	**.40**	**.57**	**.68**	1.00
L5	.20	**.47**	**.38**	**.33**	**.41**	**.45**	**.52**	**.33**	**.44**	**.35**	**.45**	**.47**	**.66**	**.60**	.15	**.35**	**.38**	.22	**.37**	**.35**	**.34**	**.42**	**.62**	**.84**

Note. n = 76; Correlation coefficients equal to or greater than .30 are in bold. Inter-item correlations within the same subscale below .30 are denoted by italics. KS= Knowledge of Self, KR= Knowledge of Rights, C= Communication Skills, L= Leadership Skills

Table 7

SAMY Total Scale and Subscale Cronbach's Alpha if Deleted and Corrected Item-Total Correlations

Item	Total Scale Cronbach's α If Deleted	Total Scale Corrected Item-Total Correlation	Subscale Cronbach's α If Deleted	Subscale Corrected Item-Total Correlation
KS1	**.93**	.36	**.88**	.45
KS2	.93	.53	.85	.68
KS3	.93	.56	.85	.68
KS4	.93	.64	.84	.74
KS5	.93	.70	.84	.73
KS6	.93	.70	.85	.68
KS7	.93	.65	.85	.62
KR1	.93	.48	.86	.68
KR2	.93	.56	.87	.57
KR3	.93	.63	.86	.68
KR4	.93	.73	.85	.73
KR5	.93	.55	.87	.60
KR6	.93	.53	.86	.66
KR7	.93	.60	.85	.75
C1	.93	.55	.77	.46
C2	.93	.52	**.79**	.37
C3	.93	.62	.73	.63
C4	.93	.46	.77	.48
C5	.93	.60	.73	.63
C6	.93	.53	.72	.65
L1	.93	.65	**.88**	.52
L2	.93	.62	.78	.73
L3	.93	.61	.78	.74
L4	.93	.71	.79	.74
L5	.93	.65	.81	.64

Note. Items that increase Cronbach's alpha if deleted are in boldface. Subscale Cronbach's alpha if deleted and corrected item-total correlation coefficients are reported for each item within each of the four subscales with a bold underline indicating the beginning of the next subscale. KS= Knowledge of Self, KR= Knowledge of Rights, C= Communication Skills, L= Leadership Skills.

corresponding subscale. Corrected item-total correlation coefficients for all items within each subscale exceeded the generally accepted level of .3 (Standards, 2014) and are reported in Table 7. Coefficients on the Knowledge of Self subscale ranged from .45 to .74, Knowledge of Rights subscale ranged from .57 to .75, Communication Skills subscale ranged from .37 to .65, and Leadership Skills subscale ranged from .52 to .74. These findings support that all of the items at least moderately relate to the corresponding subscale, all of the items provide some uniqueness to the subscale, and none of the items have such high commonality to suggest it may need to be removed as it is not providing anything new to the scale. Therefore, none of the items were flagged for removal from the SAMY based on the influence on whole scale and subscale internal consistency.

Test-retest analyses. Test-retest reliability was calculated for 20% of respondents (n = 15) for which two rounds of the SAMY were completed. Mean number of days between time 1 and time 2 was 40 days. The Pearson correlation coefficient revealed a correlation of .253 (p = .36) between SAMY Total Score at time 1 (M = 50.93, SD = 23.05) and SAMY Total Score at time 2 (M = 46.20, SD = 11.69), which is a somewhat weak correlation. Since test-retest analyses should theoretically have strong correlations to indicate consistent scoring on items across time, these results would not support the reliability of the SAMY scores in this sample. However, given the average difference between Time 1 and Time 2 Total Scores (M = 10.87, SD = 20.72), visual analysis revealed one outlier that was significantly negatively affecting the overall correlation between scores (see Table 8). Recalculating the Pearson product moment correlation after removing this outlier resulted in a high correlation coefficient of r = .87, p <.01 between SAMY Total Score at Time 1 and SAMY Total Score at Time 2. Similar

Table 8

Difference Between Time 1 and Time 2 SAMY Total Scores

Participant	Time 1	Time 2	Difference
1	46	62	16
2	55	48	-7
3	49	52	3
4	44	51	7
5	117	33	-84
6	86	71	-15
7	46	44	-2
8	28	29	1
9	29	31	2
10	46	48	2
11	48	52	4
12	31	37	6
13	58	55	-3
14	37	42	5
15	44	38	-6

Note. n = 15, M = 10.87, SD = 20.72, Min = 1, Max = 84

analyses were then run for this sample (n = 14) for each subtest (see Table 9). The Knowledge of Rights, Communication Skills, and Leadership Skills subscales revealed strong positive correlations. The correlation between Knowledge of Rights Time 1 to Time 2 was moderate. These findings provide preliminary support for the consistency of SAMY total and subscale scores across approximately one month of time.

Table 9

SAMY Test-Retest Correlations for Total Score and Subscales

Scale	Time 1		Time 2		
	M	*SD*	*M*	*SD*	*r*
Total Score	46.21	14.58	47.14	11.53	.87*
Knowledge of Self	16.21	6.15	16.57	5.23	.89*
Knowledge of Rights	10.50	3.96	11.93	3.02	.44
Communication Skills	12.00	4.11	11.21	2.99	.94*
Leadership Skills	7.50	3.11	7.43	2.28	.76*

Note. n = 14; *p <.01

Research Question 3: What factor measurement model is supported as the most appropriate model for interpreting the Self-Advocacy Measure for Youth in elementary students with ADHD?

Principal components analysis with promax rotation, parallel analysis, and the conceptualized framework were utilized to provide evidence of internal structure and construct validity of the formative model of self-advocacy measured by the SAMY. Kaiser's criterion considers eigenvalues greater than 1.0 to provide a meaningful contribution to the overall variance of the scale (Fabrigar et al., 1999). Responses from 76 parent/caregivers revealed six components with eigenvalues greater than 1.0 that explained 74.05% of the total variance. Eigenvalues, percent of variance explained, and cumulative variance for the first 10 components are provided in Table 10. Eigenvalues for each component are also presented in a scree plot in Figure 4.

Table 10

Components Indicated by Eigenvalues and Variance Explained for 25 Item SAMY (n = 76)

Component	Eigenvalue	% of Variance	Cumulative Variance
1	10.15	40.60	40.60
2	2.47	9.88	50.47
3	1.93	7.73	58.20
4	1.50	5.98	64.18
5	1.44	5.74	69.92
6	1.03	4.12	74.05
7	.89	3.58	77.62
8	.76	3.05	80.67
9	.71	2.85	83.52
10	.61	2.43	85.95

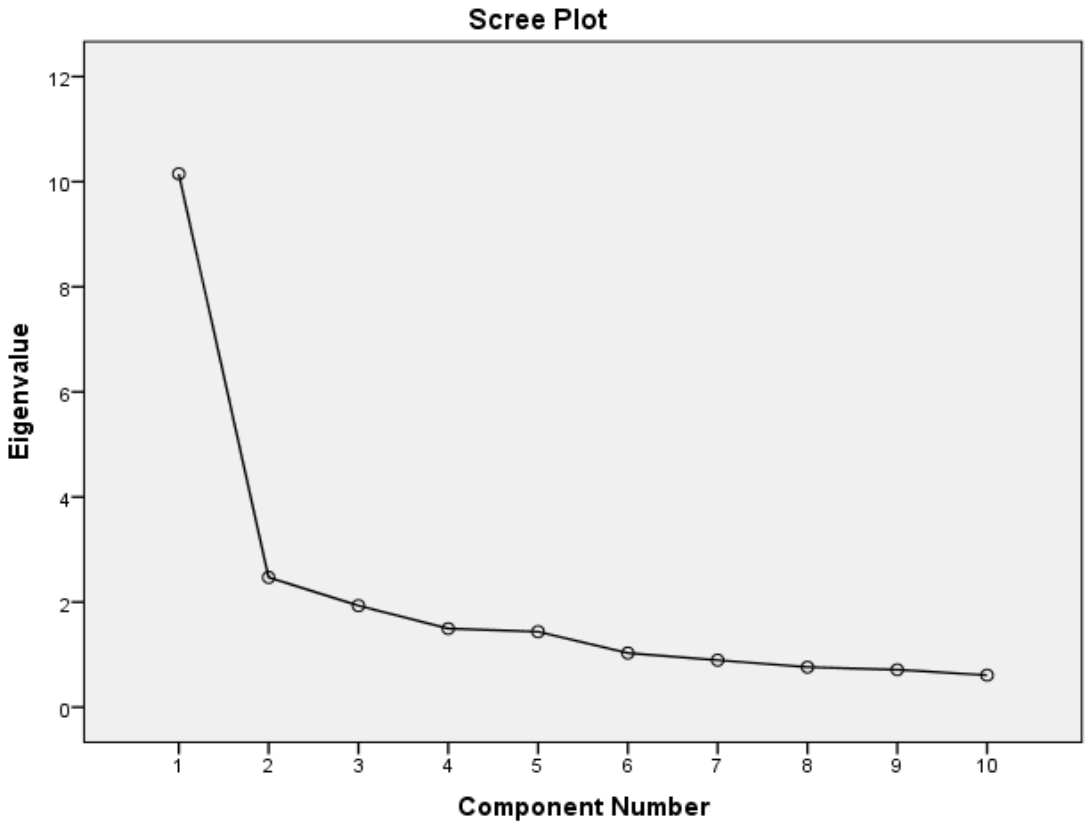

Figure 4. Scree plot of eigenvalues for 25 item SAMY by component; *n* = 76

Scree plot analysis also supported six meaningful components that should be considered in light of the theoretical framework based on the visual flattening of the line after the sixth component (see Figure 4).

The next step utilized to determine the most appropriate model for interpreting the SAMY was examination of how each item loaded on each of the six components supported by eigenvalue and scree plot analyses. The highest loading for each item, as well as any secondary loadings to be considered, are presented in Table 11. Knowledge of Self items 1 through 5 had the highest loadings on components 1 and the remaining two Knowledge of Self items (6 and 7) had the highest loadings on component 6. The items fit best under these respective components as they contributed the most to these

components while contributing very little to the other components. Five of the seven Knowledge of Rights items had the highest loadings in component 2. These items fit best under this component as they contributed the most to component 2 while contributing very little to the other components. Item KR2 demonstrated the best fit to component 6. The seventh item within the Knowledge of Rights subscale (KR6) was the only knowledge item that had moderate, relatively equal loadings on two components (2 and 3). Communication Skills items 3, 4, and 5 demonstrated the highest loadings on component 4. Communication Skills items 1 and 3 demonstrated the highest loadings on components 5. The final Communication Skills item (C2) demonstrated moderate and relatively equal loadings on both components 5 and 6. All of the items within the Leadership Skills subscale had the highest loadings on components 3 or 5 (L3, L4, L5 and L1, L2, respectively). The items fit best under these two components as they contributed the most to these components while contributing very little to the other components. None of the items demonstrated such poor fit that removal of the item from the scale would considerably improve the self-advocacy model represented.

Given that the theoretical conceptualization of self-advocacy included four components, additional techniques were utilized to gather information regarding which factor measurement model demonstrates the best fit for the construct of self-advocacy. First, a principal components analysis forcing a four component model was computed. The results of this technique demonstrated some alignment with the theoretical conceptualization, while other items did not align with how they were conceptualized to fit with the corresponding subtest or component (see Table 12).

Table 11

SAMY Item Factor Loadings for Principal Component Analysis with Promax Rotation

	Component					
Item	1	2	3	4	5	6
KS1	**.62**	.04	-.18	.06	-.19	.17
KS2	**.82**	-.30	.12	-.06	-.13	.02
KS3	**.90**	-.01	.03	-.08	.07	-.11
KS4	**.85**	.05	-.01	-.05	.22	-.13
KS5	**.64**	.08	.20	.04	.12	-.04
KS6	.30	-.14	.10	.18	-.06	**.64**
KS7	.20	-.26	.29	.19	-.07	**.62**
KR1	-.09	**.82**	-.04	-.01	.19	-.09
KR2	-.20	.17	-.04	-.06	.11	**.86**
KR3	.36	**.68**	-.20	.11	.04	.04
KR4	.13	**.55**	-.05	.24	.11	.18
KR5	.10	**.37**	.30	-.38	.15	.31
KR6	-.04	*.60*	**.63**	-.11	-.16	.00
KR7	-.10	**.76**	.46	.07	.-08	-.06
C1	.10	.27	-.34	-.07	**.73**	.16
C2	-.15	.02	.17	-.25	*.48*	**.52**
C3	-.16	.37	.08	.25	**.49**	.01
C4	.04	.30	.04	**.79**	-.14	-.18
C5	.04	-.03	.04	**.78**	.10	.06
C6	-.16	-.10	.11	**.89**	.14	.05
L1	-.05	-.04	-.09	.35	**.67**	.18
L2	.05	.00	.32	.00	**.79**	-.17
L3	.14	-.20	**.74**	.03	.44	-.18
L4	-.01	.13	**.75**	.10	.00	.16
L5	.02	.14	**.82**	.13	-.16	.11

Note. n = 76; Pattern matrix loadings reported. Loadings in bold indicate the highest loading for an item. Loadings in italics indicate the second highest loading for an item when considered relevant. KS= Knowledge of Self, KR= Knowledge of Rights, C= Communication Skills, L= Leadership Skills.

Table 12

SAMY Item Factor Loadings for Principal Component Analysis Forcing Four Components

	Component			
Item	1	2	3	4
KS1	-.12	**.43**	-.06	.28
KS2	.06	**.77**	-.13	.06
KS3	-.10	**.86**	.07	-.03
KS4	-.14	**.84**	.24	-.03
KS5	.12	**.67**	.11	.07
KS6	.17	*.32*	-.05	**.53**
KS7	.27	*.34*	-.18	**.49**
KR1	**.45**	-.28	.57	-.06
KR2	**.36**	-.23	.32	.34
KR3	.16	.04	**.46**	.23
KR4	.25	-.05	**.44**	.37
KR5	**.62**	.12	.29	-.27
KR6	**.96**	-.07	-.01	-.15
KR7	**.84**	-.20	.19	.02
C1	-.23	.12	**.93**	-.04
C2	.31	.06	**.47**	-.10
C3	.16	-.09	**.62**	.18
C4	.01	-.10	.00	**.76**
C5	-.15	.10	.09	**.82**
C6	-.14	-.03	.06	**.87**
L1	-.24	.15	**.65**	.35
L2	.08	.42	**.61**	-.24
L3	.38	**.60**	.08	-.20
L4	**.77**	.21	-.10	.10
L5	**.84**	.20	-.28	.13

Note. n = 76*;* Pattern matrix loadings reported. Loadings in bold indicate the highest loading for an item. Loadings in italics indicate the second highest loading for an item when considered relevant. KS= Knowledge of Self, KR= Knowledge of Rights, C= Communication Skills, L= Leadership Skills.

Table 13

SAMY Item Factor Loadings for Principal Component Analysis Forcing Two Components

	Component	
Item	1	2
KS1	**.63**	-.20
KS2	**.74**	-.10
KS3	**.77**	-.10
KS4	**.77**	-.01
KS5	**.67**	.15
KS6	**.72**	.10
KS7	**.70**	.10
KR1	-.23	**.89**
KR2	.08	**.60**
KR3	.26	**.50**
KR4	.28	**.58**
KR5	-.12	**.81**
KR6	-.24	**.92**
KR7	-.21	**.96**
C1	.17	**.48**
C2	-.01	**.65**
C3	.12	**.63**
C4	**.53**	.02
C5	**.78**	-.08
C6	**.71**	-.09
L1	**.50**	.26
L2	.24	**.51**
L3	.37	**.38**
L4	.22	**.64**
L5	.21	**.58**

Note. n = 76; Pattern matrix loadings reported. Loadings in bold indicate the highest loading for an item. KS= Knowledge of Self, KR= Knowledge of Rights, C= Communication Skills, L= Leadership Skills.

Next, parallel analysis was conducted to gather additional evidence regarding how many components should be retained by comparing the eigenvalues generated from a

random dataset with those generated from the current sample. Two components from the PCA with the current sample demonstrated larger eigenvalues than those from the randomly generated dataset, thus supporting a two factor measurement model. Consequently, a principal components analysis forcing a two component model was computed to determine if results would further support a two-factor model. The results of this technique provided support for the Knowledge of Self items aligning together and the Knowledge of Rights items aligning together; however, Communication Skills and Leadership Skills items did not align as would be predicted from the theoretical model (see Table 13).

In summary, two, four, and six factor measurement models are each supported in different ways. These findings are impacted by the small sample size included in this study and are, therefore, considered preliminary evidence. Additional interpretations are discussed in the following chapter.

Research Question 4: To what extent is the interpretation of scores on the Self-Advocacy Measure for Youth (SAMY) valid for elementary school youth with ADHD?

Chapter Three described procedures utilized to increase construct, content, and respondent processes evidence of validity during the development of the SAMY. In addition to those methods, psychometric evidence of discriminant validity was gathered by analyzing the relationship between the Total Scale scores elementary age youth identified as having ADHD obtained from caregiver ratings on the SAMY to the overall scale score received on the AIR. Both scales utilize a 5-point scoring rubric for each item. However, the AIR contains 30 items compared to the 25 items included in the

SAMY. Similar to calculations conducted for scores on the SAMY, the mean total and subscale scores were divided by the number of items within each subscale. The converted mean and standard deviation youth obtained on the AIR were as follows: Total score $M = 3.10$; $SD = 0.60$; Knowledge of Self-Determination Behaviors subtest $M = 2.72$, $SD = 0.84$; Ability to Perform Self-Determination Behaviors subtest $M = 2.61$, $SD = 0.77$; Perception of Knowledge and Ability to Perform Self-Determination Behaviors subtest $M = 2.72$, $SD = 0.91$; Opportunity to Perform Self-Determination Behaviors at School subtest $M = 3.46$, $SD = 0.85$; and Opportunity to Perform Self-Determination Behaviors at Home subtest $M = 3.98$, $SD = 0.70$. Visual analyses indicate that the youth tended to obtain higher ratings on the AIR items than on SAMY items. Additionally, the Pearson correlation coefficient revealed a significant correlation between SAMY Total Score and AIR Total Score; $r = .47$, $p < .01$. This finding indicated that the overall scores these youth obtained on the SAMY had a moderate, positive relationship with the overall scores obtained on the AIR; as the score on one scale increased, the score on the other scale was also somewhat likely to increase.

Research Question 5: To what extent do elementary school youth with ADHD exhibit self-advocacy skills?

The final research question examined in this study focused on the extent to which elementary school students with ADHD exhibit self-advocacy skills based on parent/caregiver reports. The results of 76 respondents provided preliminary data regarding self-advocacy skills in the target population through several analyses.

Comparing youth across recruitment locations. First, the nonparametric Mann-Whitney test was used to compare the distribution of SAMY Total scores across

the two recruitment locations to determine if these scores differed significantly. This method was utilized due to the unbalanced number of participants across the two comparison groups. The results indicated there was not a significant difference in the distribution of SAMY Total scores for participants recruited through schools (Mean Rank = 36.71) compared to those of participants recruited through clinics (Mean Rank = 38.90; $U = 409$, $p = .74$). These findings suggested that results were similar across participants recruited from each location.

Comparing youth with IEP and Section 504 Plans. Second, analyses were conducted comparing youth identified as having ADHD and an IEP ($n = 41$) with those identified as having a Section 504 Plan ($n = 35$). An independent *t*-test was utilized to compare mean total scores because the cases in the two groups were independent, the total scores demonstrated acceptable normal distribution, and homogeneity of variances was demonstrated across the two groups. The results indicated there was not a significant difference in the Total Scale scores for students with an IEP ($M = 49.66$, $SD = 19.75$) and students with a Section 504 Plan ($M = 52.54$, $SD = 16.52$); $t(74) = 0.68$, $p = .50$. Similar analyses performed for each subscale revealed no significant differences between students in these two groups: Knowledge of Self $t(74) = 1.63$, $p = .097$; Knowledge of Rights $t(74) = -.01$, $p = .995$; Communication Skills $t(74) = 1.03$, $p = .306$; and Leadership Skills $t(74) = -0.98$, $p = .33$. These findings suggested that students with IEP and Section 504 Plans in this sample demonstrated similar self-advocacy skills. The mean scores for both groups of students fell in the low end of the range of possible scores on the SAMY (Min = 25; Max = 125).

Comparing youth in lower and upper elementary school. Finally, two analyses provided information regarding students' ability to demonstrate self-advocacy skills in elementary school. First, an independent t- test determined that a statistically significant difference existed between the Total Scale scores for students in grades K-2 (n = 23; M = 41.57; SD = 14.30) compared to students in grades 3-5 (n = 53; M = 55.08; SD = 18.41); $t(74)$= -3.13, p = .003. Next, point biserial correlation compared the total scores and subscale scores on the SAMY for students in the lower elementary school level (grades K-2) versus upper elementary school level (grades 3-5) in order to analyze the relationship between these variables. The Pearson correlation coefficient revealed a significant correlation between school level and SAMY Total Score, r = .34, p < .01, based on a sample of 76 cases. Therefore, a significant positive relationship of moderate strength existed between school level and SAMY Total score: as school level increased, the SAMY Total Scale score also tended to increase. This relationship is exhibited in the boxplot in Figure 5. Similar comparisons of subscale scores and school level revealed significant correlations for the Knowledge of Self subscale, r = .42, p < .01, Knowledge of Rights subscale, r = .20, p < .05, Communication Skills subscale, r = .21, p < .05, and Leadership Skills subscale, r = .27, p < .01. These findings indicated that all of the subscales have positive relationships with school level in that as the school level increased each subscale score also tended to increase.

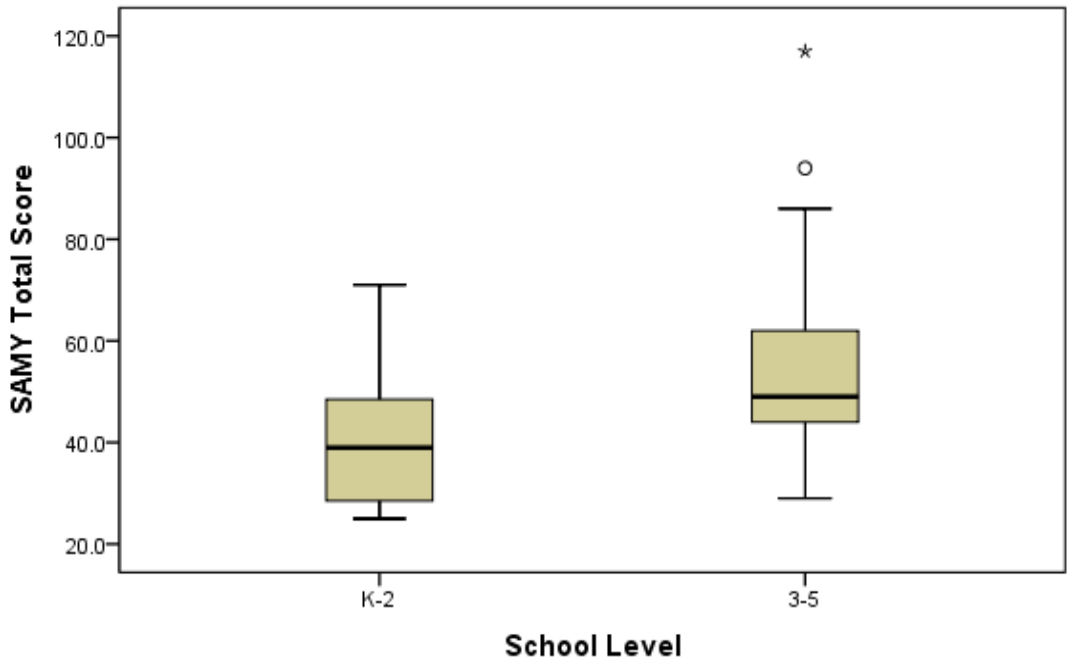

Figure 5. Boxplot demonstrates the positive correlation between elementary school level and SAMY Total Score. Lower elementary level Kindergarten through second grades (K-2) and upper elementary level third through fifth grades (3-5).

CHAPTER FIVE

Discussion

The purpose of this study was to develop a measure of self-advocacy skills with psychometric evidence to support the use of this instrument with youth identified as having ADHD. This chapter provides interpretations of the results within the context of the pertinent literature. Delimitations of the current study, limitations, implications for the field of school psychology, and suggestions for future research are discussed.

Research Question 1: What items best assess the construct of self-advocacy skills in youth with ADHD at the elementary school level?

Procedures utilized to develop the SAMY items and scale provide the main support for the items identified to measure self-advocacy. First, the construct of self-advocacy was operationally defined based on the conceptual framework of self-advocacy for students with disabilities proposed by Test, Fowler, Wood, and colleagues (2005). Given the interpersonal interaction required in order for a person to engage in self-advocacy, this measure was purposefully developed to assess self-advocacy in youth from the perspective of others. Teachers and parents are in ideal positions to observe youth demonstrating self-advocacy, such as by communicating about their educational needs and rights. Second, following the theoretical factors characteristic of the formative model utilized in developing this measure (Coltman et al., 2007), items were purposefully developed that each uniquely assess an indicator of the latent construct of self-advocacy. The formative model theorizes three key characteristics that are indicated in measuring

the construct of self-advocacy: 1) the latent construct is formed from the composite of the skills within the construct; 2) changes in items representing each of these skills cause changes in the latent construct of self-advocacy; and 3) each item provides some uniqueness to the scale, therefore, items are not interchangeable. Due to the SAMY conceptually consisting of these formative model characteristics, item development processes were crucial to the fit of each item within this self-advocacy construct.

Items on the SAMY were designed to demonstrate causation so that so that an increase in ability in each skill as indicated by an item causes an increase on the score of the item representing that skill. Similarly, as the score for each of these unique skills increases, it leads to a change in the score for the overall subscale and total scale scores. Item development procedures facilitated these item characteristics. The first version of the SAMY underwent two revisions based on feedback from expert reviewers and cognitive interviews with representatives from the subpopulation for which the SAMY was developed. These processes provided content and construct evidence (Standards, 2014) of the items included in the third version of the SAMY utilized in the preliminary validity study. The following interpretations of statistical data are in light of the importance of content and construct validity fundamental to the formative model. The presence of secondary reflective measurement characteristics are discussed when applicable.

Statistical subscale characteristics data indicate that the SAMY Total Scale, Knowledge of Self subscale, and Communication Skills subscale total scores exhibited relative symmetry and normal distribution. The Leadership Skills subscale demonstrated slight positive skew and kurtosis, while the Knowledge of Rights subscale demonstrated

a somewhat positive skew and a large positive kurtosis. Given the additive nature of the items, rather than expecting normal distribution of scores, skew and kurtosis are interpreted as an indicator of overall skill level demonstrated by the sample included in the study.

An examination of subscale total score means is required to facilitate interpretation of these subscale characteristics. Given the varying number of items in each subscale, subscale total item means (subscale mean divided by the number of items in the subscale) serve as the basis of this interpretation. Based on ratings from their parents/guardians, youth designated as having ADHD included in this study obtained the highest subscale total item score mean on the Communication Skills subscale, with Knowledge of Self, Leadership Skills, and Knowledge of Rights subscales following in order from next highest to lowest.

The conceptualized framework of self-advocacy for students with disabilities (Test, Fowler, Wood et al., 2005) indicates Knowledge of Self skills as the most basic set of skills in the hierarchy of developing self-advocacy. Therefore, the expectation was that the mean item scores for this scale would be highest. Additionally, given that self-advocacy was proposed to increase as youths' cognitive and social emotional development increases, the hypothesis was that elementary school youth with ADHD would obtain somewhat moderate scores on this scale. As each item has a 1 through 5 scoring rubric, a score of 3 would be a moderate score. Typical development suggests that young elementary school children should be able to label basic aspects of themselves, such as being able to state a simple name of their diagnosis (Item KS1; Walker, 1980) and describe a relative strength and weakness (Items KS3 and KS7).

Additionally, these skills should improve throughout elementary school (Eccles, 1999). Although not statistically the highest subscale total item mean, the Knowledge of Self mean score is close to the highest mean and all of the item mean scores fall within the score range of 2 to 3. Therefore, the elementary school youth with ADHD included in this study are beginning to demonstrate some Knowledge of Self skills with (score of 2) and without (score of 3) assistance. Developmentally, the expectation is that the ratings students obtain on these skills will improve from low to moderate and from moderate to high scores (scores of 4 and 5) as they progress through elementary and middle school grades.

Unexpectedly, the subscale total item mean for Knowledge of Rights was the lowest with all mean item scores falling between the score range of 1 to 2. Additionally, the scale and several items within the scale (KR1, KR5, KR6, KR7) demonstrated moderate to considerable skew and kurtosis. These characteristics indicate that most of the youth obtained ratings below the mean (scores of 1) with a few outlying scores falling well above than the mean. Overall, the youth identified as having ADHD included in this study are not yet demonstrating Knowledge of Rights skills. This finding is unexpected because the prediction based on the self-advocacy framework and theories of development was that Knowledge of Rights skills would align more similarly with the Knowledge of Self skills. Considering the typical developmental skills present in elementary school youth (Eccles, 1999; Gallagher, 1993; Selman, 1971; Walker, 1980), these youth should grasp Knowledge of Rights skills, such as knowing the name of their accommodation plan (IEP or 504 Plan; KR1) similarly to Knowledge of Self skills, such as stating the name of his or her diagnosis (KS1; Attention-Deficit/Hyperactivity

Disorder); however, there is a discrepancy between the mean scores on these two items (KS1= 2.38, KR1= 1.43).

One explanation is that these youth have been taught these skills, but they did not comprehend the information or are not yet able to demonstrate their knowledge to others. For example, if a youth is taught that he or she has a 504 Plan without being shown the plan, this concept becomes more abstract than being taught that he or she has a disorder of ADHD with symptoms the person can concretely feel. A more plausible hypothesis for the differences between demonstrated skills in these subscales is that these youth are not being taught Knowledge of Rights skills. The likelihood is that more elementary school youth are present during their medical visits during which their diagnosis of ADHD is discussed than during the school meetings where their accommodation plans are discussed. This exposure may have contributed to these youth demonstrating more Knowledge of Self skills than Knowledge of Rights skills.

The youth included in this study were rated as having the highest subscale total item score mean on the Communication Skills subscale. This result is surprising as it was hypothesized that youth would develop Knowledge of Self and Knowledge of Rights skills prior to being able to communication about this knowledge (Test, Fowler, Wood et al., 2005). Closer examination of the individual item characteristics reveals data to support this hypothesis. The items that explicitly relate to Knowledge of Self and Knowledge of Rights have lower means than other items in the subscale that assess more general communication skills. Specifically, items C1 ["This youth can identify when it is an appropriate situation to communicate with (tell) adults about his or her diagnosis], C2 (This youth asks for accommodations or support from adults using appropriate

assertiveness), and C3 ["This youth can identify when it is an appropriate situation to communicate with (tell) peers about his or her diagnosis] involve communicating about knowledge of oneself. The mean scores for these items indicate that most of the youth are not yet demonstrating these skills (score of 1) or need assistance to communicate this knowledge (score of 2). In comparison, the remaining three items in the subscale were not directly related to Knowledge of Self and Knowledge of Rights skills and yielded higher mean scale scores. Items C4 ("This youth can listen to and demonstrate understanding of another person's opinion in conversation"), C5 ("This youth can problem-solve with adults using negotiation and/or compromise"), and C6 ("This youth can problem-solve with peers using negotiation and/or compromise") assess more general communication skills. These mean scores on these items indicate that most of the youth are beginning to develop these communication skills with (score of 2) and without (score of 3) assistance. One explanation for the unexpected finding that the Communication Skills subscale yielded the highest mean score amongst the subscales is that youth can develop some self-advocacy communication skills, such as the ability to negotiate and problem-solve, separate from other self-advocacy skills. Although mastering self-advocacy communication skills may be more challenging than mastering concrete knowledge about oneself or one's rights (Gallagher, 1993; Test, Fowler, Wood et al., 2005), the youth included in this study appear to have been exposed to and are demonstrating the basic levels of problem-solving communication skills.

The Leadership Skills subscale yielded the lowest total item mean scores across the four subscales. This finding was expected as Leadership Skills were theorized as being the last overall skills to develop (Test, Fowler, Wood et al., 2005). Item L1 ("This

youth understands that other people can have the same diagnosis") yielded a moderate mean item score, indicating that elementary school youth with ADHD included in this study are beginning to recognize that they belong to a group of individuals with the same diagnosis with (score of 2) and without (score of 3) assistance. This finding is not surprising as identification with a group was considered the easiest of the leadership skills to develop, thus placed first in the subscale. Middle childhood age youth typically are grasping the concept of comparing themselves to others to identify groups they belong to (Eccles, 1999; Walker, 1980) and were expected to obtain low to moderate skills on item L1. All of the other items within the Leadership Skills subscale demonstrated low mean scores, providing evidence that these elementary school age youth are not yet demonstrating most of the skills that indicate the self-advocacy construct of leadership. These four items also demonstrated considerable positive skew (L3 and L5) and/or kurtosis (L2, L3, L4, and L5), further indicating that scores centered on the lowest score of 1. These individual item characteristic results match expectations based on the developmental conceptualization that leadership skills would be the last self-advocacy skills to develop, as well as the fact that the sample of youth in this study are only from elementary school.

Interpretation of these item characteristics leads to consideration of modifications to the items and subscales. As the Knowledge of Self and Leadership Skills subscales and items functioned overall as predicted, no modifications to these subscales or items are indicated. Because the youth obtained lower mean scores on the overall Knowledge of Rights subscale than predicted, moving the subscale was considered. However, the choice was made to retain its placement within the SAMY given the plausible hypothesis

that the elementary school youth identified as having ADHD may not have been explicitly taught Knowledge of Rights skills. The Knowledge of Self and Knowledge of Rights Subscales contain items that measure more concrete skills than the other two subscales. One possible modification to the Communication Skills subscale would be to change the sequence of the items within the subscale to place the items that assessed more general communication skills first. However, the decision was made to retain the current order of the items as it aligns with the hypothesized order of difficulty to *master* each of these skills.

Research Question 2: To what extent are the scores from the Self-Advocacy Measure for Youth reliable for elementary students with ADHD?

Evidence to support reliability of interpreting the scores on the SAMY is discussed in terms of internal consistency of the total scale and subscale scores and results of test-retest analyses. Regarding the overall scale, a high level of internal consistency was demonstrated between all of the items included in the SAMY and all of the items were positively correlated. As predicted, these findings demonstrate that all of the items in the scale positively relate to one construct, self-advocacy, and support the presence of reflective measurement characteristics in addition to the primary formative model conceptualized. Furthermore, it can be inferred given the formative model conceptualized, that each of the items cause variation in the self-advocacy construct in that as the score on one item increases, so will the total scale score (Cenfetelli & Bassellier, 2009; Coltman et al., 2007). Finally, item-total statistics support the hypothesis that all items in this measure contribute at least some uniqueness to the global

construct. No items are indicated for removal based on interpretations of the internal consistency of the SAMY Total Scale.

Internal consistency analyses for each subscale demonstrated a fairly high level of intercorrelation between the items within each subconstruct. Based on the formative model, items should not have high communality and should each contribute uniquely to the subscale (Cenfetelli & Bassellier, 2009; Coltman et al., 2007). Therefore, the items with correlations below .30 are interpreted in consideration of the contribution each item is making to the subconstruct being measured rather than the effect removal of the item has on the subscale internal consistency. Only items on the Communication Skills subscale demonstrated low inter-item correlations. As previously discussed, items C1, C2, and C3 necessitate Knowledge of Self and Rights skills to accomplish, while C4, C5, and C6 do not. The inter-correlation findings for the Communication Skills subscale support this conceptual relationship as C1, C2, and C3 all demonstrate higher correlations with each other than with the remaining items in this subscale. Considering the content contribution of the items included in the Communication Skills subscale, none of the items are indicated for modification or removal.

Initial analyses of the relationship between participants' first responses on the SAMY and second responses approximately one month later revealed a weak correlation that was not significant. However, when one major outlier was removed, a strong positive correlation was present for the SAMY Total Scale, Knowledge of Self, Communication Skills, and Leadership Skills subscales. The Knowledge of Rights subscale demonstrated a moderate correlation, but was not significant. The interpretations of these results are that the SAMY Total Scale score and three subscale

scores are typically consistent across approximately one month of time and the Knowledge of Rights scores were not as consistent as desired. However, the power of these findings is limited given the small sample size of 14. A larger scale study with a greater number of participants completing two rounds of the SAMY for test-retest analyses would increase the power and provide additional support for the reliability of interpreting scores over time.

High overall scale internal consistency, high subscale internal consistency, and consistency of participant responses across time all provide preliminary evidence of the reliability of interpretation of SAMY scores for elementary school youth identified as having ADHD. Considering both the content contribution made and impact on the reliability of scores, no items were indicated for modification.

Research Question 3: What factor measurement model is supported as the most appropriate model for interpreting the Self-Advocacy Measure for Youth in elementary students with ADHD?

The hypothesis based on theoretical considerations was that a four-factor measurement model would emerge from a principal components analysis; however, initial PCA and scree plot analyses of participant responses indicated six components and parallel analysis supported a two-factor measurement model. Computing PCA forcing four components did not sufficiently align all of the items with the theorized four subconstructs. Forcing two-factors using PCA similarly did not reveal desired results to support a two-factor model.

When all information from PCA, parallel analysis, and the theoretical framework are considered together, some information supports a two-factor model as the best

method to measure the construct of self-advocacy. First, the six components that emerged in the initial PCA appear to further condense into two factors when three components are merged together into one and the other three components are merged into another. Specifically, all of the Knowledge of Rights and Knowledge of Self items fall into the same three factors based on their primary loadings, except one item that falls within this alignment based on a high secondary loading. The titles of the Knowledge of Self and Knowledge of Rights subscales infer at least minimal communality across these subconstructs as all of the items require concrete information that is explicitly taught in order to demonstrate mastery of the skill. Likewise, all of the Communication Skills and Leadership Skills items fall within the other three components based on their primary loadings, except one item that falls within this alignment based on a high secondary loading. The content of the items similarly identify one underlying construct needed to master both the communication and leadership skills included in the measure: communication. The results of the parallel analysis similarly supported a two factor measurement model. Although this result is somewhat unexpected given the four factor model originally theorized, it is not unreasonable to conceptualize self-advocacy as two factors while continuing to utilize the existing framework of self-advocacy for youth with disabilities.

One possibility is to modify the measure into two subscales, Knowledge and Communication, rather than the four current subscales. Another possibility is to interpret the findings in light of the difficulty level purposefully imposed into the sequence of the items and subscales. The fact that the items are sequenced from easiest to most difficult skill to master within each subscale could be impacting the alignment of the items within

the principal components analysis. All of the items identified in components 4 and 5 of the PCA output were hypothesized to be easier skills for youth to demonstrate, compared to all of the items that aligned with component 3, which were hypothesized to be the most difficult skills in the scale to master. Additional evidence supporting this explanation is that the means for items in components 4 and 5 are higher than the means of the items in component 3 of the PCA output.

This study was an initial gathering of evidence to support the interpretation of scores on the SAMY for elementary age youth identified as having ADHD and included a small sample of participants. As such, the evidence gathered regarding the appropriate factor measurement model for interpreting results of the SAMY is preliminary. The results from this investigation should be combined with information gathered in future studies utilizing larger samples prior to confirming the original four-factor measurement model or modifying the theory of what number of factors best measures the construct of self-advocacy.

Research Question 4: To what extent is the interpretation of scores on the Self-Advocacy Measure for Youth (SAMY) valid for elementary school youth with ADHD?

The observation that youth generally obtained higher mean item scores based on parent/caregiver responses on the AIR than compared to scores obtained on SAMY items suggests that parents more readily endorsed higher scores on the self-determination items than on the self-advocacy skills items included in the SAMY. Comparison across scales is made cautiously; however, this observation may provide some evidence for the challenges related to using the AIR to measure self-advocacy skills in these youth. Two

possible hypotheses for this finding are related to the content of the items. First, the items on the AIR may be measuring developmentally easier skills for youth to master. Another hypothesis for this finding is that the AIR measures more than just observed skills of the youth. Two of the subscales within the AIR measure opportunities the youth are presented with to demonstrate their skills. For example, the first item in the subscale Opportunity to Perform Self-Determination Behaviors reads "Student has opportunities at school to explore, express, and feel good about own needs, interests, and abilities." The five remaining items in this scale, as well as all six of the items in the following scale, Opportunity to Perform Self-Determination Behaviors at Home, similarly assess opportunity and do not specifically ask whether the youth is demonstrating a skill. A foreseeable result is that parent respondents would more readily endorse high scores on items related to opportunity compared to items related to actual skills demonstrated.

The moderate correlation demonstrated between caregiver-reported traits of self-advocacy for elementary age youth with ADHD on the SAMY and self-determination skills as indicated on the AIR provides preliminary evidence of discriminant validity. These results were expected. This study conceptualized self-advocacy as one of the most important subconstructs within self-determination (Algozzine et al., 2001). Given this view, a measure of self-determination should fully encompass all of the components of self-advocacy in its operational definition and demonstrate a strong correlation between the self-determination measure and a measure of self-advocacy. However, the review of relevant literature provided evidence that existing self-determination measures have not sufficiently operationally defined self-determination to fully encompass the aspects included in the definition of self-advocacy. The outcome of this literature review

suggested that any self-determination measure chosen for comparison would likely yield only a moderate correlation between self-determination and self-advocacy. The AIR scale was specifically chosen for this analysis of discriminant validity because the content of the items encompassed at least some aspects of self-advocacy while psychometric evidence was available to support use with elementary age youth. The moderate correlation demonstrated between the two measures supports that they are not interchangeable.

The results of procedures utilized to develop the SAMY provided vital evidence of the validity of interpretation of scores for elementary school youth identified as having ADHD. The moderate correlation and differences in item mean scores between the SAMY and the AIR provide additional evidence of discriminant validity.

Research Question 5: To what extent do elementary school youth with ADHD exhibit self-advocacy skills?

Results of this preliminary study of elementary school youth identified as having ADHD revealed no statistical difference between total or subscale scores for students with an IEP versus students with a Section 504 Plan. Initially, this finding was unexpected due to federal laws requiring students to participate in the development of their transition goals and service plans by the IEP that will be in place on their fourteenth birthday (IDEA, 1997) and the lack of this mandate for students with Section 504 Plans. The expectation was that students with an IEP, even those at the elementary school level, would be exposed to some instruction in self-advocacy in preparation for this mandate, while students with 504 Plans would not. As a result, the hypothesis was that students with an IEP would exhibit greater self-advocacy skills than students with a 504 Plan.

However, closer examination of the results indicated that both groups of students were rated by their parents as demonstrating overall low levels of self-advocacy. This finding supports that neither group is exhibiting emerging self-advocacy skills. Given the lack of research in the literature on self-advocacy skills in elementary school children with disabilities and the frequent call for teaching self-advocacy skills throughout students' schooling, rather than waiting until secondary school (Test, Fowler, Brewer, & Wood, 2005), the low level of self-advocacy skills indicated across both groups of students is not surprising.

A statistically significant difference existed between the Total Scale scores for students in in lower elementary school (grades K-2) compared to students in upper elementary school (grades 3-5), and a significant, positive correlation was demonstrated between overall scores for students in the two elementary school levels. These findings indicate that as children increase in school level their demonstration of observable self-advocacy skills also tends to increase, and this result aligns with predictions made based on the conceptualized developmental sequence of the SAMY total scale and subscales. Growth in overall cognitive, communication, perspective-taking, and social-emotional development as youth mature from early childhood through pre-adolescence is necessary for youth to develop more complex self-advocacy skills. The SAMY items were conceptualized to allow for observed growth in self-advocacy skills to be rated from low, not yet demonstrating a skill, to moderate, demonstrating a skill with and without assistance, to high, demonstrating a skill with mastery. Similarly, subscales were conceptualized to encompass both foundational self-advocacy skills that are more concrete, such as stating the name of one's disability, and higher level skills that are more

abstract, such as being able to take other's perspectives in order to advocate for the group. Based on the strong, positive correlation yielded between lower and upper level elementary school students indicated as having ADHD, preliminary statistical support for this developmental conceptualization of the construct of self-advocacy is provided.

Delimitations

One limitation intentionally included in the design of this study was creating a measure of self-advocacy reported by caregivers about their children. Although the results are limited by the subjectivity of the respondents and their opportunities to observe these skills, this limitation was included for two reasons. First, caregivers served as respondents instead of students themselves to avoid the positive illusory bias students diagnosed with ADHD tend to exhibit (Hoza et al., 2004). These students tend to overestimate their skills. Parent ratings were utilized in hope of obtaining more accurate ratings of the skills these youth are demonstrating. Second, caregivers were included to address the fact that advocacy skills are inherently interpersonal. In order to advocate for oneself, knowledge about one's disability, accommodations that are needed, and strategies that are beneficial must be communicated to another person. If a person knows this information but is not sharing it with others, then the person is not engaging in self-advocacy. Therefore, caregiver reports of observed self-advocacy skills are preferable to self-reported skills.

The second delimitation was including only caregivers of elementary age students as participants. Time, funding, and resources available imposed restricting study participants to one school level. Elementary age students were chosen due to the fact that no quantitative data exists regarding self-advocacy skills in students in this school level.

Additionally, because elementary school is when the majority of students with ADHD initially receive their diagnosis, the need to begin gathering evidence of self-advocacy skills at this school level was indicated.

Limitations of the Current Study

Interpretation of the results of this study should occur with consideration of the limitations incurred. Primary limitations of this study include subjectivity of parent reports, recruitment procedures and challenges, and sample characteristics.

As mentioned above, the SAMY is a subjective measure of respondents' perceptions of youth's self-advocacy skills. Respondents may not have understood the questions asked or responses may not reflect actual levels of self-advocacy skills. Item and scale development procedures, including cognitive interviewing with parents and teachers similar to those targeted to respond in the validation study, were utilized to improve respondent consistency, which is supported by test-retest results. However, the outlier in the test-retest analysis illustrates that responses can vary. Furthermore, respondents may have felt inclined to provide socially desirable responses. Explanations provided in the study consent procedures regarding the purpose of the study and the utilization of only aggregated data, rather analyses of individual respondent data, aimed to counter this limitation.

Several limitations relate to recruitment procedures and challenges. An unforeseen limitation was the low response rate of individual schools to assist with recruiting participants for the study. Out of over 200 elementary schools that exist between the two school districts included in this study, recruitment strategies yielded only 12 schools in which both a school staff member agreed to assist with the study and

the school principal agreed for recruitment to occur in the school. Challenges enlisting individual schools to assist with recruitment resulted in a disproportionate number of respondents recruited from clinic settings compared to school settings. While statistical analyses did not reveal a significant difference between SAMY Total Scale scores for participants recruited through schools compared to those recruited through clinics, the small number of respondents included from school recruitment locations remains a limitation to interpreting and generalizing results. Another limitation pertaining to participant recruitment is that selection bias may have occurred during the recruitment process if not all students with ADHD at participating schools and clinics were appropriately identified and provided study recruitment materials. Similarly, staff assisting with the recruitment process could have unwittingly influenced parent participation. Furthermore, the variation in methods utilized to distribute recruitment flyers for this study poses a potential limitation. Respondents who received flyers sent home with their children at school may have differed from parents who were handed the flyer in the clinic settings. One strategy implemented to counter the limitations related to recruitment was that clear instructions were provided to staff assisting with recruitment at both the schools and the clinics.

Sample characteristics pose additional limitations. The result of recruitment challenges was a small sample (n = 76) of participants all obtained from one state. Although an adequate number of participants were recruited to perform statistical analyses and provide preliminary evidence of validity and reliability, the small sample size and limited geographic location of participants restricts the power and generalizability of the results. Incentives for participation were provided as a method to

improve response rate, but the desired outcome was not experienced. Length of time to complete study materials may have negatively impacted recruitment. The estimated 20-30 minutes needed to complete study materials was communicated to potential participants and may have deterred participation. Recruiting from schools and clinics across two counties aimed to counter the effects of obtaining participants from a convenience sample; however, geographic location of the sample obtained remains a limitation to the generalizability of results.

Implications for School Psychologists

Development of self-advocacy skills beginning with youth in elementary school is an important contributor to the long-term successful outcomes of students with disabilities. Prior to this study, no psychometrically sound measure existed to assess self-advocacy skills in youth with disabilities. Consequently, no quantitative data were available regarding self-advocacy skills in elementary age students identified as having ADHD. This study contributes to the fields of psychology and education by creating a measure of the broad construct of self-advocacy for parents and caregivers to complete about their students with disabilities. This study also provides preliminary evidence for the use of the SAMY to assess self-advocacy skills in elementary school youth identified as having ADHD. The findings from this study provide evidence that these elementary school youth are not currently exhibiting to their caregivers the foundational skills necessary to become successful self-advocates. This study calls for school psychologists to contribute to improving self-advocacy skills in elementary school youth. School psychologists, counselors, and other educators are encouraged to utilize the SAMY to assist with collecting baseline self-advocacy data, selecting evidence-based interventions

to further develop self-advocacy skills, and monitoring the impact of these interventions for youth with ADHD. This measure is intended to be a clinical tool to inform these educational practices and lead to strategies to increase self-advocacy skills in youth, rather than a high-stakes decision-making tool. Therefore, the fact that psychometric evidence is preliminary should not prevent use of the SAMY to inform interventions.

Parents and educators alike can explicitly teach elementary school youth basic information about their diagnosis, characteristics of their IEP or 504 Plan, rights due to their disability, and how to communicate with others about themselves and their plan. The literature review discussed three programs previously utilized to increase self-advocacy skills in elementary students with ADHD. The authors created the first program (Danneker & Bottge, 2009) by combining modules from the Florida Department of Education *Standing Up for Me* self-determination curriculum (Cooper, Roder, Wichmanowski, & Yeretzian, 2004) and modules they specifically developed for the study. The second curriculum previously utilized as a self-advocacy intervention is the *Building Awareness 5th Grade Smarts Unit* (Moran, 2008). The third curriculum, which specifically teaches students the skills needed to participate in developing their IEP is the *I Can Use Effort* intervention (Hickey & Howell, 1990). School personnel are encouraged to assess self-advocacy skills utilizing the SAMY, implement self-advocacy skill development interventions that address identified areas of need, and progress monitor growth.

Future Research Directions

Although this study created a measure of self-advocacy skills and provided preliminary psychometric evidence to support its use with elementary school youth with

ADHD, extensions of this study are needed. Numerous potential future research studies that would positively contribute to the self-advocacy literature are proposed. First, replication of this study utilizing a larger sample size is essential to improving the generalizability of study results. Youth could be compared across gender, SES, and racial/ethnic groups. Including youth in the sample from a greater number of geographic locations would similarly improve generalizability. The SAMY was developed for use with youth across the elementary, middle, and high school levels in order to compare skills at these levels and track progress. The current study logistics limited inclusion to only elementary school students; therefore, replicating the study with students from across the three school levels is necessary. Likewise, conducting a study monitoring self-advocacy skill development longitudinally would greatly enhance the evidence supporting use of the SAMY across school levels. Furthermore, the SAMY was developed for use with students with varying disabilities. Gathering evidence to support the reliability and validity of score interpretation with students with other disabilities or health disorders, such as specific learning disabilities, autism spectrum disorder, or Type 1 diabetes, would enable the measure to be used with these populations. Additionally, developing a self-report version of the SAMY that would enable caregiver ratings to be compared to youth's ratings of their own self-advocacy skills would positively contribute to the self-advocacy literature and enable further analysis of the theory of positive illusory bias in youth with ADHD. Finally, the influence of parent advocacy skills on youth's self-advocacy ability is unknown. Conducting a study comparing parent and child advocacy skills would likely further inform the field regarding intervention strategies.

Several strategies would facilitate these future research studies. Enlisting staff at recruitment locations to assist with obtaining participants is more fruitful when conducted in person. Similarly, response rates from participants were substantially higher when provided recruitment materials in person. Both in person recruitment strategies and increased incentives for completion of study materials are recommended in order to obtain larger samples for future research studies. Finally, the timing of when potential participants are recruited appears to impact participation. School staff reported that spring is a difficult time of year to add tasks on to the already taxed schedules of employees and parents. Late fall and early winter appear to be better recruitment times to facilitate participation from schools.

Conclusions

This study sought to develop a measure of self-advocacy skills with evidence to support the valid and reliable interpretation of scores for youth identified as having ADHD. Results support that all items in the SAMY fit the theoretical construct of self-advocacy and measure a multi-dimensional construct. Evidence of content, construct, and discriminant validity is provided for score interpretation with these youth. Preliminary reliability of scores over time is demonstrated. Additionally, strong positive correlations between overall self-advocacy skills and elementary school level support the theoretical progression of self-advocacy skill growth mirroring overall development. These findings would be strengthened by future research with a larger sample in order to improve generalizability of the current results. Similarly, including youth across school levels would further support the hypothesis that self-advocacy skill development follows the sequence of overall development in youth. Considering the framework of self-advocacy

for youth with disabilities, scale and individual item characteristics, consistency of scores indicated, and evidence to support validity of score interpretation, this study provides preliminary evidence for utilizing the Self-Advocacy Measure for Youth to assess self-advocacy in youth identified as having ADHD based on caregiver report.

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Appendices

Appendix A

Self-Advocacy Measure for Youth- Version 1

The Self-Advocacy Measure for Youth

SAMY

Instructions:
Use the scoring guide and the response scale to complete the following statements based on your interactions with and observations of the student.

Response Scale Key:

1 = Not at all
2 = Partially or inconsistently given assistance or prompting
3 = Partially or is beginning to complete the task inconsistently, *without* assistance
4 = Mostly; most of the time completes the task independently
5 = Mastery; consistently engages in the task independently

This student can...

Knowledge of Self Items	Response Scale
1. State the technical name of his or her diagnosis/disability	1 2 3 4 5
2. Name the main characteristics of the diagnosis/disability	1 2 3 4 5
3. Describe at least two symptoms that are particularly challenging to the student	1 2 3 4 5
4. Describe at least one strategy per challenging symptom that he or she can independently implement for improvement	1 2 3 4 5
5. Describe at least one strategy per challenging symptom that the student can ask someone else to implement for improvement	1 2 3 4 5
6. State long-term goals student is aiming for	1 2 3 4 5
7. State short-term, measureable goals	1 2 3 4 5
8. Describe a personal strength the student can use to help reach identified goals	1 2 3 4 5
	Total:
Knowledge of Rights Items	Response Scale
1. State the name of the legal accommodation plan the student has (IEP, 504)	1 2 3 4 5
2. Describe the reason for having an accommodation plan in terms of the overall rights afforded to him or her by the plan	1 2 3 4 5
3. Describe all individual accommodations included in the plan	1 2 3 4 5
4. Explain when the accommodations included in the plan apply	1 2 3 4 5
5. Identify persons who can assist with implementing the plan appropriately (who should know about the plan; who can help when the plan has been violated, etc.)	1 2 3 4 5
6. Describe steps that could be taken that would likely result in resolution of a violation of the plan	1 2 3 4 5
7. Describe steps that should be taken that would likely result in changes to the current plan	1 2 3 4 5

	Total:
Communication Skills Items	**Response Scale**
1. Articulate to adults about the disability or diagnosis and its characteristics when circumstances arise in which it is needed or appropriate	1 2 3 4 5
2. Request accommodations and support from adults using appropriate assertiveness	1 2 3 4 5
3. Request accommodations and support from adults in appropriate circumstances	1 2 3 4 5
4. Articulate to peers about the disability or diagnosis and its characteristics appropriately	1 2 3 4 5
5. Problem-solve through negotiation and/or compromise with adults	1 2 3 4 5
6. Problem-solve through negotiation and/or compromise with peers	1 2 3 4 5
7. Listen to and incorporate others' information into conversations	1 2 3 4 5
8. Participate to the extent allowed in the development of his or her plan	
	Total:
Leadership Skills Items	**Response Scale**
1. Demonstrate understanding that others have similar diagnoses or disabilities	1 2 3 4 5
2. Increase others' understanding of the group's dynamics (characteristics of the diagnosis/disability not just relative to the student but to the whole group)	1 2 3 4 5
3. Express group needs appropriately when communicating with adults	1 2 3 4 5
4. Express group needs appropriately when communicating with peers	1 2 3 4 5
5. Negotiate plans for action or change that meet the groups' expressed needs	1 2 3 4 5
6. Motivate others to work together in order to meet the groups' expressed needs	1 2 3 4 5
7. Assume diverse roles within the group based on what is best for the groups' needs (lead when appropriate; support and follow another's lead when appropriate)	1 2 3 4 5
	Total:

Knowledge of Self Total	_____
Knowledge of Rights Total	_____
Communication Skills Total	_____
Leadership Skills Total	_____
Total Scale Score	_____

Name of student: _____ Age: _____ Grade: _____

Name of person completing form: _____ Relation to student: _____

Date completed: _____ How many days per week do you interact with this student? _____

How long have you known this student? ____ years _____months

Appendix B

Self-Advocacy Measure for Youth- Version 2

The Self-Advocacy Measure for Youth
SAMY

Name of youth: _____ Age: _____ Grade: _____

Name of person completing form: _____ Relation to youth:_____

Date completed: _____ How many days per week do you interact with this youth? _____

How long have you known this youth? ____ years _____months

Instructions:

Based on your observations of and interactions with this youth, use the response scale within each item to indicate his or her *current* ability to demonstrate each of the following skills:

Knowledge of Self: This youth can...	Response Scale
1. State the technical name of his or her diagnosis	
• The youth does not know the name at all	1
• The youth says an abbreviated name or nickname with prompting or assistance	2
• The youth says an abbreviated or nickname *without* assistance	3
• The youth says the full name with minimal assistance or inconsistently	4
• The youth can consistently state the full name of the diagnosis independently	5
2. Describe several main characteristics (symptoms) of his or her diagnosis	
• The youth cannot describe any of the characteristics	1
• The youth describes 1 or 2 characteristics with prompting or assistance	2
• The youth describes 1 or 2 characteristics *without* assistance	3
• The youth can describe 3 or more characteristics sometimes or inconsistently	4
• The youth can and does independently describe 3 or more key symptoms independently	5
3. Based on the characteristics or symptoms of the diagnosis, the youth can describe at least two symptoms that he or she has difficulty with (i.e., this youth's particular challenges)	
• The youth cannot describe any personally challenging symptoms	1
• The youth describes 1 challenging symptom with prompting or assistance	2
• The youth describes 1 challenging symptom *without* assistance	3
• The youth can describe 2 personally challenging symptoms sometimes or inconsistently	4
• The youth can and does independently describe at least 2 challenging symptoms consistently	5
4. For each challenging symptom described in Question #3 above, the youth can state a strategy that someone else could do that helps him or her address the challenge (i.e., an accommodation a teacher can make, a way a peer could provide assistance, etc.)	
• The youth cannot state any appropriate strategies	1
• The youth states a strategy for one of his or her challenges with some assistance	2
• The youth states a strategy for each of his or her challenges with some assistance	3
• The youth states one strategy *without* assistance and additional strategies with assistance	4
• The youth states at least one strategy per challenge independently and consistently	5

5. For each challenging symptom described in Question #3 of this section, the youth can describe at least one strategy he or she can *personally* implement to address the challenge	
• The youth cannot state any appropriate strategies to personally implement	1
• The youth states a strategy for one of his or her challenges with some assistance	2
• The youth states a strategy for each of his or her challenges with some assistance	3
• The youth states one strategy *without* assistance and additional strategies with assistance	4
• The youth states at least one strategy per challenge independently and consistently	5
6. Describe at least one long-term academic goal he or she is aiming for	
• The youth cannot describe any personal long-term academic goals	1
• The youth states a basic academic goal with prompting or assistance	2
• The youth states a basic academic goal *without* assistance (e.g., I want to go to the next grade; I want to go to college)	3
• The youth states a specific academic goal with some details with minimal assistance (e.g., I want to get at least a C in all my classes so that I pass to the next grade)	4
• The youth independently and consistently describes at least one specific, long-term academic goal	5
7. Describe a personal strength he or she can use to help reach identified goals	
• The youth cannot describe any personal strengths	1
• The youth a personal strength with prompting or assistance	2
• The youth states a personal strength *without* assistance, but is not yet able to relate how to use the strength to help reach his or her goals	3
• The youth can state a personal strength and is beginning to be able to relate how to use the strength to help reach his or her goals inconsistently or with minimal assistance	4
• The youth independently and consistently describes at least one personal strength and how to use that strength to reach his or her goals	5
	Total:
Knowledge of Rights: This youth can...	Response Scale
1. State the name of the legal accommodation plan the youth has (IEP, 504)	
• The youth does not know the name at all	1
• The youth says an abbreviated name or nickname with prompting or assistance	2
• The youth says an abbreviated or nickname *without* assistance	3
• The youth says the full name with minimal assistance or inconsistently	4
• The youth can consistently state the full name of the plan independently	5
2. Explain why he or she has this plan	
• The youth cannot explain why he or she has the plan	1
• The youth states a basic reason with prompting or assistance (i.e., it provides assistance, provides rights, etc.)	2
• The youth states a basic reason *without* assistance	3
• The youth states a specific reason for the plan with some details with minimal assistance (e.g., My plan tells my teachers what works for me to help me be able to show what I know)	4
• The youth independently and consistently can explain at least one specific reason why he or she has the legal accommodation plan	5

3. State several individual accommodations included in his or her plan • The youth cannot state any of the accommodations • The youth states 1 or 2 accommodations with prompting or assistance • The youth states 1 or 2 accommodations *without* assistance • The youth can state 3 or more accommodations sometimes or inconsistently • The youth can and does independently state 3 or more accommodations independently	1 2 3 4 5
4. Demonstrates an understanding of when the accommodations included in the plan apply • The youth cannot yet explain when the plan applies at all • The youth demonstrates a basic understanding of when the plan applies with prompting or assistance (i.e., in all of my classes, when I'm taking a test, etc.) • The youth demonstrates a basic understanding of when the plan applies *without* assistance • The youth demonstrate an in depth understanding of when the plan would and would not apply inconsistently or with some assistance • The youth independently and consistently demonstrates an in depth understanding of when the plan would and would not apply	1 2 3 4 5
5. Describe the steps to take in order to make changes to the current plan • The youth does not yet understand any steps to changing his or her plan • The youth demonstrates a beginning understanding of the steps (i.e., the team decides at a meeting) • The youth describes several steps in making changes to his or her plan with some prompting or assistance • The youth describes several steps in making changes to the plan independently • The youth independently explains the whole process involved in making changes to his or her plan	1 2 3 4 5
6. Describe an appropriate action to take when the plan has been violated (not implemented correctly) • The youth does not yet understand that the plan can be violated • The youth describes a basic action to take with prompting or assistance (i.e., I can remind my teacher that I get extra time) • The youth describes a basic action to take *without* assistance • The youth describes a detailed plan of what to do when his or her plan has been violated inconsistently or with some assistance • The youth independently and consistently explains what to do if the plan has been violated	1 2 3 4 5
7. Participate to the extent allowed in the development of his or her plan • The youth does not yet participate in the development of his or her plan • The youth provides some input in the development of the plan when prompted (such as by indicating preferences when asked) • The youth is beginning to participate in the development of his or her plan with some independence (such as by asking questions or making requests) • The youth moderately participates in the development of his or her plan (such as by helping to set up or run the meeting, helping to draft the plan, etc.) • The youth consistently participates in the development of his or her plan to the extent allowed (such as by running the majority of the meeting, creating a draft of goals, etc.)	1 2 3 4 5
	Total:

Communication Skills: This youth can...	Response Scale
1. Identify the appropriate circumstances (situations) to communicate about his or her disability to adults	
• The youth does not yet demonstrate this skill	1
• The youth sometimes identifies appropriate circumstances to explain his or her disability to adults with assistance or prompting	2
• The youth sometimes identifies appropriate circumstances to explain his or her disability to adults *without* assistance	3
• The youth often identifies appropriate circumstances to explain his or her disability to adults with minimal assistance	4
• The youth typically independently understands when it is appropriate to explain his or her disability to adults with minimal assistance	5
2. Request accommodations and support from adults using appropriate assertiveness (i.e., confidently; in a polite, yet firm manner)	
• The youth does not yet ask for accommodations or support from adults	1
• The youth is beginning to ask for accommodations or support from adults with assistance or prompting	2
• The youth sometimes or inconsistently asks for accommodations or support from adults using appropriate assertiveness *without* prompting	3
• The youth often asks for accommodations or support from adults with appropriate assertiveness with minimal assistance	4
• The youth typically independently asks for accommodations or support from adults with appropriate assertiveness (demonstrates mastery of this skill)	5
3. Identify the appropriate circumstances (situations) to communicate about his or her disability to peers	
• The youth does not yet demonstrate this skill	1
• The youth sometimes identifies appropriate circumstances to explain his or her disability to peers with assistance or prompting	2
• The youth sometimes identifies appropriate circumstances to explain his or her disability to peers *without* assistance	3
• The youth often identifies appropriate circumstances to explain his or her disability to peers with minimal assistance	4
• The youth typically independently understands when it is appropriate to explain his or her disability to peers (demonstrates mastery of this skill)	5
4. Listen to and incorporate (or include) another person's opinion into his or her verbal response	
• The youth does not yet demonstrate this skill	1
• The youth sometimes listens to and incorporates another person's opinion into his or her responses with assistance or prompting	2
• The youth sometimes listens to and incorporates another person's opinion into his or her responses *without* assistance	3
• The youth often listens to and incorporates another person's opinion into his or her responses with minimal assistance	4
• The youth typically independently listens to and incorporates another person's opinion into his or her responses (demonstrates mastery of this skill)	5

5. Problem-solve through negotiation and/or compromise with adults	
• The youth does not yet use negotiation and/or compromise to problem-solve with adults	1
• The youth sometimes uses negotiation and/or compromise to problem-solve with adults with assistance or prompting	2
• The youth sometimes uses negotiation and/or compromise to problem-solve with adults *without* assistance	3
• The youth often uses negotiation and/or compromise to problem-solve with adults with minimal assistance	4
• The youth typically independently uses negotiation and/or compromise to problem-solve with adults (demonstrates mastery of this skill)	5
6. Problem-solve through negotiation and/or compromise with peers	
• The youth does not yet use negotiation and/or compromise to problem-solve with peers	1
• The youth sometimes uses negotiation and/or compromise to problem-solve with peers with assistance or prompting	2
• The youth sometimes uses negotiation and/or compromise to problem-solve with peers *without* assistance	3
• The youth often uses negotiation and/or compromise to problem-solve with peers with minimal assistance	4
• The youth typically independently uses negotiation and/or compromise to problem-solve with peers (demonstrates mastery of this skill)	5
	Total:
Leadership Skills: This youth can...	Response Scale
1. Demonstrate understanding that other people can have the same diagnosis	
• The youth does not yet understand that others can have the same diagnosis	1
• The youth is beginning to understand that others can have the same diagnosis with assistance or prompting	2
• The youth sometimes or inconsistently understands that others can have the same diagnosis *without* prompting or assistance	3
• The youth often understands that others can have the same diagnosis with minimal assistance	4
• The youth has fully grasped the concept that other people can have the same diagnosis	5
2. Help others understand the overall characteristics of people with this diagnosis (not just relative to him or herself, but to the whole group)	
• The youth does not yet help others understand the overall characteristics of people with this diagnosis	1
• The youth sometimes helps others understand the overall characteristics of people with this diagnosis with assistance or prompting	2
• The youth sometimes helps others understand the overall characteristics of people with this diagnosis *without* assistance	3
• The youth often helps others understand the overall characteristics of people with this diagnosis with minimal assistance	4
• The youth independently helps others understand the overall characteristics of people with this diagnosis on a consistent basis	5

3. Help others understand the general needs of people with this diagnosis (not just relative to him or herself, but to the whole group) • The youth does not yet help others understand the general needs of people with this diagnosis • The youth sometimes helps others understand the general needs of people with this diagnosis with assistance or prompting • The youth sometimes helps others understand the general needs of people with this diagnosis *without* assistance • The youth often helps others understand the general needs of people with this diagnosis with minimal assistance • The youth independently helps others understand the general needs of people with this diagnosis on a consistent basis	 1 2 3 4 5
4. Negotiate plans for change or action on behalf of the overall groups' expressed needs • The youth does not yet negotiate plans for change or action on behalf of the group • The youth is beginning to negotiate plans for change or action on behalf of the group with assistance or prompting • The youth sometimes negotiates plans for change or action on behalf of the group *without* assistance • The youth often negotiates plans for change or action on behalf of the group with minimal assistance • The youth independently negotiates plans for change or action on behalf of the overall group's needs on a consistent basis	 1 2 3 4 5
5. Motivate others to work together in order to meet the group's expressed needs • The youth does not yet motivate others to work together in order to meet the group's needs • The youth is beginning to motivate others to work together in order to meet the group's needs with assistance or prompting • The youth sometimes motivates others to work together in order to meet the group's needs without adult assistance • The youth often motivates others to work together in order to meet the group's needs • The youth independently motivates others to work together in order to meet the group's needs consistently	 1 2 3 4 5
	Total:

Knowledge of Self Total	_____
Knowledge of Rights Total	_____
Communication Skills Total	_____
Leadership Skills Total	_____
Total Scale Score	_____

Appendix C

Self-Advocacy Measure for Youth- Version 3

The Self-Advocacy Measure for Youth
SAMY

Participant Code #: _____ Your relation to the youth (circle one): Parent/Guardian Teacher

Date you are completing this form (MM/DD/YYYY): _____ This youth is _____ years old.

This youth is in (just completed) grade: _____ The youth's gender is (circle one): Male Female Other

The youth's ethnicity is (circle one): Hispanic/Latino Not Hispanic/Latino Unknown/Prefer Not to Answer

The student's race is (circle one): American Indian/Alaskan Native Asian Black/African American Native Hawaiian/Pacific Island White Multiracial Unknown/Prefer Not to Answer

Instructions:

Based on all of your observations and interactions with this youth, indicate which choice best represents his or her *current* ability to demonstrate each of the self-advocacy skills related to the diagnosis of ADHD. Please answer ALL questions. If you are uncertain of an answer, consider all of your interactions with this youth to make the best choice.

Knowledge of Self:	Circle One Per Item
1. This youth can state the technical name of his or her diagnosis	
• The youth does not know the name at all	1
• The youth can say an abbreviated name or nickname with assistance	2
• The youth can say an abbreviated or nickname without assistance, but not the full name	3
• The youth can say the full name inconsistently	4
• The youth can state the full name of the diagnosis consistently	5
2. This youth can describe several characteristics (symptoms) of his or her diagnosis	
• The youth cannot describe any of the characteristics	1
• The youth can describe 1 characteristic with assistance	2
• The youth can describe 1 characteristic without assistance	3
• The youth can describe 2 characteristics without assistance	4
• The youth can describe 3 or more characteristics without assistance	5
3. This youth can describe several impairments (challenges) he or she experiences related to the characteristics (symptoms) of the diagnosis	
• The youth cannot describe any relative impairments	1
• The youth can describe 1 relative impairment with assistance	2
• The youth can describe 1 impairment without assistance	3
• The youth can describe 2 impairments without assistance	4
• The youth can describe 3 or more impairments without assistance	5
4. For each impairment, this youth can state a strategy that SOMEONE ELSE could do that helps him or her address the impairment (i.e., an accommodation a teacher can make, a way a peer could help, etc.)	
• The youth cannot state any appropriate strategies	1
• The youth can state a strategy to address 1 impairment with assistance	2
• The youth can state a strategy to address 1 impairment without assistance	3
• The youth can state 1 strategy to address 1 impairment and another strategy to address another impairment without assistance	4
• The youth can state at least one strategy for 3 or more impairments	5

5. For each impairment, this youth can describe a strategy he or she can PERSONALLY implement to address the impairment (e.g., use a planner to track assignments) • The youth cannot state any appropriate strategies • The youth can state a strategy to address 1 impairment with assistance • The youth can state a strategy to address 1 impairment without assistance • The youth can state 1 strategy to address 1 impairment and another strategy to address another impairment without assistance • The youth can state at least one strategy for 3 or more impairments	1 2 3 4 5
6. This youth can describe long-term academic goals he or she is aiming for • The youth cannot describe any personal long-term academic goals • The youth can state a basic academic goal with assistance • The youth can state a basic academic goal without assistance (e.g., I want to go to the next grade; I want to go to college) • The youth can state a specific academic goal with some details without assistance (e.g., I want to get at least a C in all my classes so that I pass to the next grade) • The youth can describe 2 or more specific, long-term academic goals without assistance	1 2 3 4 5
7. This youth can describe a personal strength he or she can use to help reach identified goals • The youth cannot describe any personal strengths • The youth can describe a personal strength with assistance • The youth can describe a personal strength without assistance, but is not yet able to relate how to use the strength to help reach his or her goals • The youth can describe a personal strength and is beginning to describe how to use the strength to help reach his or her goals • The youth can describes 2 or more personal strengths and how to use these strengths to reach his or her goals	1 2 3 4 5
	Total:
Knowledge of Rights:	Response Scale
1. This youth can state the name of the legal accommodation plan he or she has (IEP or 504) • The youth does not know the name at all • The youth can state an abbreviated name or nickname with assistance • The youth can state an abbreviated or nickname without assistance • The youth can state the full name of the plan inconsistently • The youth can state the full name of the plan consistently	1 2 3 4 5
2. This youth can explain why he or she has this plan • The youth cannot explain why he or she has the plan • The youth can state a basic reason for the plan with assistance (e.g., it provides assistance, provides rights, etc.) • The youth can state a basic reason for the plan without assistance • The youth can state a specific reason for the plan with some details with assistance (e.g., My plan tells my teachers what works for me to help me be able to show what I know) • The youth can explain at least one specific reason why he or she has this plan without assistance	1 2 3 4 5

3. This youth can state several individual accommodations included in his or her plan (e.g., extra time to complete assignments) • The youth cannot state any of the accommodations • The youth can state 1 accommodation with assistance • The youth can state 1 accommodation without assistance • The youth can state 2 accommodations without assistance • The youth can state 3 or more accommodations without assistance	 1 2 3 4 5
4. This youth demonstrates an understanding of when (under what situations) the accommodations included in the plan should be implemented • The youth cannot yet explain when the accommodations should be implemented • With assistance, the youth demonstrates a basic understanding of when the accommodations should be implemented (e.g., in all of my classes, when I'm taking a test) • The youth independently demonstrates a basic understanding of when the accommodations should be implemented • With assistance, the youth demonstrates an in depth understanding of when the accommodations should be implemented (e.g., on tests longer than I can usually focus through) • The youth independently demonstrates an in depth understanding of when the accommodations should be implemented	 1 2 3 4 5
5. This youth participates in the development of his or her plan • The youth does not yet participate in the development of his or her plan • The youth provides some input into the development of his or her plan when prompted (e.g., by indicating preferences when asked) • The youth is beginning to initiate some participation in the development of his or her plan (e.g., by asking questions or requesting accommodations to go on the plan) • The youth often initiates participation in the development of his or her plan • The youth typically (almost always) participates in the development of his or her plan	 1 2 3 4 5
6. This youth can describe the steps to take in order to make changes to the current plan • The youth does not yet understand steps to changing his or her plan • With assistance, the youth can describe 1 or 2 steps to take in order to make changes to his or her plan (e.g., someone calls my team together for a meeting) • Without assistance, the youth can describe 1 or 2 steps to take in order to make changes to his or her plan • The youth can describe all of the key steps to take to make changes to his or her plan • The youth can describe all of the key steps to take to make changes to his or her plan	 1 2 3 4 5
7. This youth can describe an appropriate action to take when the plan has been violated (not implemented correctly) • The youth does not yet understand that the plan can be violated • With assistance, the youth can describe a basic action to take (e.g., I can remind my teacher that I get extra time) • Without assistance, the youth can describe a basic action to take • The youth can describe a plan of action with some detail • The youth can explain in depth what to do if his or her plan has been violated	 1 2 3 4 5
	Total:

Communication Skills:	Response Scale
1. This youth can identify when it is an appropriate situation to communicate with (tell) ADULTS about his or her diagnosis	
• The youth cannot identify appropriate situations to communicate with adults about his or her disability	1
• The youth is beginning to identify appropriate situations with assistance	2
• The youth is beginning to identify appropriate situations without assistance	3
• The youth sometimes identifies appropriate situations without assistance	4
• The youth typically (almost always) identifies when it is an appropriate situation to communicate with adults about his or her diagnosis	5
2. This youth asks for accommodations or support from adults using appropriate assertiveness (i.e., confidently; in a polite, yet confident manner)	
• The youth does not yet ask for accommodations or support from adults	1
• The youth is beginning to ask for accommodations or support from adults with assistance	2
• The youth is beginning to ask for accommodations or support from adults using appropriate assertiveness without assistance	3
• The youth sometimes asks for accommodations or support from adults using appropriate assertiveness without assistance	4
• The youth typically (almost always) asks for accommodations or support from adults with appropriate assertiveness	5
3. This youth can identify when it is an appropriate situation to communicate with (tell) PEERS about his or her diagnosis	
• The youth cannot identify appropriate situations to communicate with peers about his or her disability	1
• The youth is beginning to identify appropriate situations with assistance	2
• The youth is beginning to identify appropriate situations without assistance	3
• The youth sometimes identifies appropriate situations without assistance	4
• The youth typically (almost always) identifies when it is an appropriate situation to communicate with peers about his or her diagnosis	5
4. This youth can listen to and demonstrate understanding of another person's opinion in conversation (e.g., by restating the other person's view in his or her own words)	
• The youth does not yet demonstrate understanding of another person's	1
• The youth is beginning to listen to and demonstrate understanding of another person's opinion with assistance	2
• The youth is beginning to listen to and demonstrate understanding of another person's opinion without assistance	3
• The youth sometimes listens to and demonstrates understanding of another person's opinion	4
• The youth typically (almost always) listens to and demonstrates understanding of another person's opinion	5

5. This youth can problem-solve with ADULTS using negotiation and/or compromise	
• The youth does not yet use negotiation and/or compromise to problem-solve with adults	1
• The youth is beginning to use negotiation and/or compromise to problem-solve with adults with assistance	2
• The youth beginning to use negotiation and/or compromise to problem-solve with adults without assistance	3
• The youth sometimes uses negotiation and/or compromise to problem-solve with adults	4
• The youth often uses negotiation and/or compromise to problem-solve with adults	5
6. This youth can problem-solve with PEERS using negotiation and/or compromise	
• The youth does not yet use negotiation and/or compromise to problem-solve with peers	1
• The youth is beginning to use negotiation and/or compromise to problem-solve with peers with assistance	2
• The youth is beginning to use negotiation and/or compromise to problem-solve with peers without assistance	3
• The youth sometimes uses negotiation and/or compromise to problem-solve with peers	4
• The youth often uses negotiation and/or compromise to problem-solve with peers	5
	Total:
Leadership Skills:	Response Scale
1. This youth understands that other people can have the same diagnosis	
• The youth does not yet understand that others can have the same diagnosis	1
• The youth is beginning to understand that others can have the same diagnosis with assistance	2
• The youth is beginning to understand that others can have the same diagnosis *without* assistance	3
• The youth sometimes undertstands that others can have the same diagnosis	4
• The youth has fully grasped the concept that other people can have the same diagnosis	5
2. This youth tries to help others understand the general CHARACTERISTICS of this diagnosis (i.e., the youth tries to explain the typical characteristics that anyone with the diagnosis can have, not just the characteristics he or she has)	
• The youth does not yet try to help others understand the general characteristics of this diagnosis	1
• The youth is beginning to try to help others understand the general characteristics of this diagnosis with assistance	2
• The youth is beginning to try to help others understand the general characteristics of this diagnosis without assistance	3
• The youth sometimes tries to help others understand the general characteristics of this diagnosis	4
• The youth often tries to help others understand the general characteristics of this diagnosis	5

3. This youth tries to help others understand the NEEDS of people with this diagnosis (i.e., the youth tries to explain the typical needs that anyone with the diagnosis can have, not just the needs he or she has)	
• The youth does not yet try to help others understand the needs of people with this diagnosis	1
• The youth is beginning to try to help others understand the needs of people with this diagnosis with assistance	2
• The youth is beginning to try to help others understand the needs of people with this diagnosis without assistance	3
• The youth sometimes tries to help others understand the needs of people with this diagnosis	4
• The youth often tries to help others understand the needs of people with this diagnosis	5
4. This youth can negotiate change or plans for action on behalf of the overall group of people with this diagnosis	
• The youth does not yet negotiate change or plans for action on behalf of the group	1
• With assistance, the youth is beginning to negotiate change or plans for action on behalf of the group	2
• Without assistance, the youth is beginning to negotiate change or plans for action on behalf of the group	3
• The youth sometimes negotiates change or plans for action on behalf of the group	4
• The youth often negotiates plans for change or action on behalf of the group	5
5. This youth leads others to work together to meet the needs of people with this diagnosis	
• The youth does not yet lead others to work together to meet the group's needs	1
• With assistance, the youth is beginning to lead others to work together to meet the group's needs	2
• Without assistance, the youth is beginning to lead others to work together to meet the group's needs	3
• The youth sometimes leads others to work together to meet the group's needs	4
• The youth often leads others to work together to meet the needs of people with this diagnosis	5
	Total:

Knowledge of Self Total	_____
Knowledge of Rights Total	_____
Communication Skills Total	_____
Leadership Skills Total	_____
Total Scale Score	_____

Appendix D

SAMY Study Eligibility Screener

Date: _____

SAMY Study Eligibility Screener

Say: **Hi _____,**

This is Carrie Adams from the self-advocacy research study. Thank you so much for your interest in participating in this study! You can help us understand more about youth's self-advocacy skill development, which is really important in helping our youth with ADHD succeed!

Say: **The first thing I need to do is ask you some questions about your child to make sure you meet eligibility criteria for the study:**

How did you hear about this study? (school/clinic) _____

What is your child's name? (first and last) _____

Are you the parent/legal guardian? (circle) Yes No (if no, ask to speak to legal guardian or skip to "not eligible statement")

Ask Parent/Guardian each of these questions:	Include	Exclude
1. **What grade is he/she in?** _____	K-5th	Other
2. **Is your child diagnosed with ADHD** (H/I, Inattn, or Combined type)?	Yes	No
3. **When was your child diagnosed with ADHD?** (month & year)	> 1 year ago	< 1 year ago
4. **Does your child have an IEP or 504 that specifically addresses ADHD/impairments associated with ADHD?** (e.g., work completion, organizing work, self-control behaviors/impulse control, attending to work/reading, etc.)	Yes (circle one) IEP 504	No
5. **What other diagnoses does your child have that are addressed by the IEP or 504?** -Ask about each of the diagnoses in each column -Circle/describe any other diagnoses	ODD anxiety, depression LD Asthma -other health impairment (not significantly impairing overall functioning) Describe other: _____	ASD Intellectually disabled DD Seizure Disorder CP -other health impairment that significantly impairs overall functioning Describe other: _____
6. (Indicate eligible or not eligible)	Eligible	Not Eligible

If not eligible, say: **I appreciate your time and interest in this study. However, you do not meet eligibility criteria. Please don't hesitate to let me know if you have any questions. Have a great day/evening.**

If eligible, say: **Congratulations! You are eligible to participate in our study ☺**

The study involves providing information about your child's self-advocacy skills by answering a series of questions.

Version 4 7.6.14

Date: _____

At the end of our conversation, I will ask you if you are willing to participate in the study. If yes, then I will send you either by email or by regular mail (or provide in person, if applicable) the following information:

1) Additional information about the study. You must read this information & give consent, or agree, to participate.

2) two rating scales for you (the parent/guardian) to complete (SAMY & AIR Research Form)

Say: **-The forms will take approximately 20-30 minutes to complete.**

-You will be assigned a study participation number. This # will be used on the forms instead of your identifying information (your name/your child's name). This way all information you provide will be kept confidential.

-The forms are to be completed within <u>one week</u> of receiving the link or mailed package. (if parent asks, clarify that mailed packets with return mail stamp within 2 weeks are sufficient)

-If you complete the forms by the deadline, then you will automatically be sent a $2 e-card to (or a gift card will be mailed if you complete the materials by mail). You will also be entered into a drawing for one of two $50 gift cards.

Say: **Do you have any questions?** (answer any questions)

Say: **Would you like to participate in the study?**

Yes (study # assigned= _____) **No**

If no, say: **Thank you for your interest. Have a great day/evening.**

If yes, say: **Thank you for participating. How would you prefer to receive the questionnaires: (circle one)**

Online/Email link Regular mail In person (if available)

What address should I send the questionnaires and/or gift card to?

_____

_____

_____

Say: **What is the best method to contact you to make sure you received the link/packet & provide a reminder to complete the questionnaire, if needed ☺ (email address or phone #):**

_____. **I intend to provide a reminder 2 days before it is due on-line/ 1 week before it is due by mail.**

Say: **If for some reason you do not receive the link/packet by** (insert date 1 week from now)__ _____, **please contact me at** TheSAMYstudy@gmail.com **and I will send another one. Please remember to complete the questions regarding your child's diagnosis of ADHD. The forms will also remind you to consider your child's ADHD diagnosis when answering the questions.**

Say: **Do you have any questions?**

Thank you again for participating. Have a great day/evening ☺

Version 4 7.6.14

Appendix E

University of South Florida Institutional Review Board Approval Letter

USF
UNIVERSITY OF
SOUTH FLORIDA

RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
(813) 974-5638 • FAX (813) 974-7091

June 3, 2013

Carolyn Adams
Psychological and Social Foundations
Tampa, FL 33612

RE: **Expedited Approval for Initial Review**
IRB#: Pro00012999
Title: Development of the Self-Advocacy Measure for Youth: Initial Validation Study in Elementary Students with Attention-Deficit/Hyperactivity Disorder

Study Approval Period: 6/3/2013 to 6/3/2014

Dear Ms. Adams:

On 6/3/2013, the Institutional Review Board (IRB) reviewed and **APPROVED** the above application and all documents outlined below.

Approved Item(s):
Protocol Document(s):
Research Protocol The SAMY Study Version 1- 5.14.13.docx
The Chair has stated: "However, amendments will have to be filed to post approval letters from the recruiting site school districts before recruiting can begin."

Consent/Assent Document(s)*:
Participant Consent Form Version 1- 5.14.13.docx (**granted a Waiver of Informed Consent Documentation)

*Please use only the official IRB stamped informed consent/assent document(s) found under the "Attachments" tab. Please note, these consent/assent document(s) are only valid during the approval period indicated at the top of the form(s). **Consents granted a waiver are not stamped.

It was the determination of the IRB that your study qualified for expedited review which includes activities that (1) present no more than minimal risk to human subjects, and (2) involve only procedures listed in one or more of the categories outlined below. The IRB may review research through the expedited review procedure authorized by 45CFR46.110 and 21 CFR 56.110. The research proposed in this study is categorized under the following expedited review

category:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Your study qualifies for a waiver of the requirements for the documentation of informed consent as outlined in the federal regulations at 45CFR46.117(c) which states that an IRB may waive the requirement for the investigator to obtain a signed consent form for some or all subjects.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval by an amendment.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

John Schinka, Ph.D.

John Schinka, Ph.D., Chairperson
USF Institutional Review Board

Appendix F

Principal Support Letter

Request for School Principal Support
to Conduct Research in School

Dear Principal,

My name is Carrie Adams, and I am a Doctoral Candidate in the School Psychology Program at the University of South Florida. I previously worked as a school psychologist in Charlotte-Mecklenburg Schools (NC) from 2001 through 2010. I experienced first-hand how important self-advocacy skills are for youth with disabilities and aspired to assist these youth with becoming effective self-advocates. I am continuing this work by completing my dissertation project on self-advocacy skills in youth with ADHD. Below is information about this study and how your school can contribute.

Title of research project: Development of the Self-Advocacy Measure for Youth: Initial Validation Study in Elementary Students with Attention-Deficit/Hyperactivity Disorder (USF IRB# 12999)

Purpose of this study: Self-advocacy skills are strongly correlated with greater independence, increased rates of college attendance, and increased rates of employment for post-secondary students with disabilities. However, little is known about developing self-advocacy skills in school-age students. I am creating the Self-Advocacy Measure for Youth (SAMY) as a way for educators, parents, and students themselves to better understand the skills that constitute self-advocacy, identify the student's current self-advocacy skills, determine what skills should be targeted for instruction, and progress monitor growth in these skills.

Approval to conduct this study: The Hillsborough County Public Schools Office of Assessment and Accountability approved this study 11/14/13. This letter is to obtain support from you to conduct research in your school as outlined below.

Study procedures: If you decide to support this study in your school, then the subsequent steps would be:

1) **Sign and email this form back to me.**
2) **The school psychologist that has volunteered to assist with recruitment will determine all students in your school with ADHD that appear to meet eligibility criteria and send a recruitment flyer home to the parents/guardians of these students (estimated time is 30-60 minutes). Recruitment flyers will be provided by the study team.**
3) **Parents who are interested in participating in the study will contact me directly and complete a brief phone screening to make final eligibility determination. Eligible and consenting parents will complete an on-line questionnaire (paper version mailed for those that request it).**
4) **Each parent will indicate a teacher for me to contact to request to participate in the study. This teacher will receive an email request to consent to and complete the same on-line questionnaires about the student's self-advocacy skills. Each teacher is free to consent or decline to participate in the study and withdraw participation at any time. Approximate time to complete the on-line questionnaire is 20-30 minutes.**

Projected Timeline: The projected time line for this study is to obtain principal support by the end of November; send recruitment flyers in December; and have parent and teacher questionnaires completed by the end of January.

Benefits to participation: I understand that time is valuable and sincerely appreciate the time and assistance provided. In addition to my sincere appreciation for helping to create this important measure, benefits to participation include:

- **Parents and teachers who participated in pilot tests of the on-line questionnaires reported an increase in their knowledge of the skills students with ADHD need in order to become successful self-advocates. They also stated feeling empowered by this knowledge to better assist their children with developing these skills.**
- **Every parent and teacher that participates in the study will automatically receive a $2 gift certificate and be entered into a drawing for additional larger gift certificates.**
- **The principal of every school that agrees to participate will receive a summary of the results of the study.**
- **Once the study is completed, the school psychologist that assisted with recruitment will receive the final version of the SAMY to use in problem analysis and intervention planning with students.**

If you have any questions, please do not hesitate to contact me at TheSAMYstudy@gmail.com or (813) 974-1048.
Thank you in advance for your time and support,

Carrie Adams, SSP, NCSP

I, (print name) _____, principal of (school name)_____

☐ **support recruitment of participants for this research study at this school.**

_____ _____
(Signature) (Date)

Appendix G

American Institutes for Research Self-Determination Scale- Research Form

Part 4: AIR Self-Determination Scale ©

Thank you for your responses so far! This is the last section!
There are **9** pages of questions remaining to answer in this questionnaire.

Directions for this section:
Each page lists characteristics and behaviors that indicate the degree to which your student demonstrates traits of self-determination and the degree to which the people influencing your student provide opportunities that foster self-determination. For each item, select the appropriate rating code based on what you have observed about your student. An example is provided to illustrate each characteristic

Here is an example of how you should mark your answers.

EXAMPLE QUESTION:
Student checks for errors after completing a project.
EXAMPLE ANSWER:
Choose the rating code which tells what your student is most like:

1 Never.....student never checks for errors
2 Almost never.....student almost never checks for errors
3 Sometimes.....student sometimes checks for errors
4 Almost always....student almost always checks for errors
5 Always.....student always checks for errors

KNOWLEDGE of Self-Determination Behaviors

34. **K1. Student knows own abilities and limitations** *
Example: James can identify his personal strengths and talents, such as his musical ability, as well as areas in which he needs improvement, like his below-average math problem-solving skills.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

35. **K2. Student knows how to set expectations and goals that satisfy own interests and needs** *
Example: Lee wants to attend college and knows that to get good grades, she needs to work hard on her assignments and complete them on time.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

36. **K3. Student knows how to make choices, decisions, and plans, to meet own goals and expectations** *
Example: When making plans to meet her goals, Lynn knows how to identify various strengths, weigh the pros and cons, and follow through.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

37. **K4. Student knows how to take actions to complete own plan successfully** *
Example: Kenneth knows how to follow through on a scheduled plan to complete his work accurately and on time.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

38. **K5. Student knows how to evaluate results of actions to determine what was effective** *
Example: Germaine knows what questions to ask to find out how well she is doing.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

39. **K6. Student knows how to change actions or plans to meet goals and satisfy needs and wants.** *
Example: Jose understands that to get an A in math, he may need to study one hour every night; if that doesn't work he may have to work two hours every night; and if that doesn't work he may have to learn to study more effectively.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

ABILITY to Perform Self-Determination Behaviors

40. **A1. Student expresses own interests, needs and abilities** *
Example: Sarah communicates her athletic interest and talent in conversations, written journals, or participation in sports activities.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

41. **A2. Student sets expectations and goals that will satisfy own interests, needs, and wants** *
Example: Loving to spend time drawing and doing art, Daniel sets the goal of finding art classes that he can take after school once a week.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

42. **A3. Student makes own choices, decisions, and plans to meet own goals and expectations** *
Example: Anna weighed the pros and cons of doing three types of history projects, chose to write a research report, outlined the report, and made a schedule for completing the report on time.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

43. **A4. Student initiates actions on own choices and plans** *
Example: Ming begins work right away each time he gets an assignment or is asked by someone to help with a project.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

44. **A5. Student gathers information on results of actions** *
Example: After completing her work, Theresa checks it for errors and asks others to look it over and make suggestions.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

45. **A6. Student changes own actions or plans to satisfy expectations and goals, if necessary** *
Example: Ricardo tries different approaches to solve problems and to complete tasks that are difficult for him.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

There are 3 pages of questions remaining to answer in this questionnaire.

PERCEPTION of Knowledge and Ability to Perform Self-Determination Behaviors

46. **P1. Student feels free to express own needs, interests, and abilities, even when facing opposition from others** *
Example: Fran defends her needs and interests to anyone who questions them.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

47. **P2. Student feels free to set own goals and expectations, even if they are different from the expectations others have for the student** *
Example: Trevor does not feel constrained by others' opinions in setting goals and expectations for himself.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

48. **P3. Student feels free to make own choices, decisions, and plans, to meet own goals and expectations** *
Example: Corine often considers her parents' suggestions when making choices and plans, but the final plans taken to meet her goals are her own.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

49. **P4. Student feels confident about being able to successfully complete own plans.** *
Example: When Nicholas schedules his own activities, he is confident he can complete them accurately and on time.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

50. **P5. Student is confident about using feedback to evaluate results of own work.** *
Example: Amanda is confident that she will be able to benefit from the feedback she receives from her parents, teachers, and peers.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

51. **P6. Student change plans again and again to meet a goal without getting discourages** *
Example: Levar is motivated to work on a project as long as it takes, using whatever approaches are necessary to get it right.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

OPPORTUNITY to Perform Self-Determination Behaviors AT SCHOOL

52. **OS1. Student has opportunities at school to explore, express, and feel good about own needs, interests, and abilities** *
Example: Christine's teachers encourage her to talk about her athletic interests and abilities and about what sports activities she wants to do.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

53. **OS2. Student has opportunities at school to identify goals and expectations that will meet his or her needs, interests, and abilities; to set these goals; and to feel good about them** *
Example: Troy's teachers let him know that he is responsible for setting his own goals to get his needs and wants met.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

54. **OS3. Student has opportunities at school to learn about making choices and plans, to make them, and to feel good about them** *

Example: Shebra's teachers allow her to make her own choices and plans for school assignments and leisure activities.

Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

55. **OS4. Student has opportunities at school to initiate actions to meet expectations and goals** *

Example: Manuel's teachers tell him that he is responsible for scheduling study time and for handing in assignments on time.

Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

56. **OS5. Student has opportunities at school to get results of actions taken to meet own plans** *

Example: Michelle's teachers are available to give feedback on projects whenever she needs it.

Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

57. **OS6. Student has opportunities at school to change actions and plans to satisfy own expectations** *
Example: Laurent's teachers encourage him to take his time and to revise his work as often as necessary to satisfy his own expectations.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

Almost done! This is the last page of questions to answer in this questionnaire.

OPPORTUNITY to Perform Self-Determination Behaviors AT HOME

58. **OH1. Student has opportunities at home to explore, express, and feel good about own needs, interests, and abilities** *
Example: Maria's parents encourage her to talk about her athletic interests and abilities and about what sports activities she wants to do.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

59. **OH2. Student has opportunities at home to identify goals and expectations that will meet his or her needs, interests, and abilities; to set goals these goals; and to feel good about them** *
Example: Roberto's parents let him know that he is responsible for setting his own goals to get his needs and wants met.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

60. **OH3. Student has opportunities at home to learn about making choices and plans, to make them, and to feel good about them** *
Example: Kelly's parents allow her to make her own choices and plans for school assignments, family chores, and leisure activities.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

61. **OH4. Student has opportunities at home to initiate actions to meet expectations and goals** *
Example: Anthony's parents tell him that he is responsible for scheduling study time and for handing in assignments on time.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

62. **OH5. Student has opportunities at home to get results of actions taken to meet own plans** *
Example: Thuy's parents are available to give feedback on projects whenever she needs it.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

63. **OH6. Student has opportunities at home to change actions and plans to satisfy own expectations** *
Example: Stacy's parents encourage him to take his time and to revise his work as often as necessary to satisfy his own expectations.
Mark only one oval.

- 1 Never
- 2 Almost Never
- 3 Sometimes
- 4 Almost Always
- 5 Always

Appendix H

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Appendix I

Participant Consent Form

This research study is conducted by Carolyn (Carrie) Adams from the School Psychology Program at the University of South Florida (USF). The purpose of this study is to develop a measure of self-advocacy to use with youth with (Attention-Deficit/Hyperactivity Disorder (ADHD).

- ✓ Who I am: I am a Nationally Certified School Psychologist and Doctoral Candidate in the School Psychology program at USF. I am developing this measure to assist parents, educators, psychologists, other mental health providers, and students with ADHD themselves in gaining a better understanding of the self-advocacy skills vital to achieving school and life goals. Self-advocacy includes understanding oneself and the diagnosis of ADHD, understanding one's rights related to having ADHD, communicating about oneself and one's rights to others effectively, and demonstrating leadership skills.

- ✓ Why I am requesting your participation: This study is being conducted for my dissertation study entitled, "Development and Validation of the Self-Advocacy Measure for Youth (SAMY)" (IRB# 12999). You are being asked to participate because you are a parent or guardian of a student with ADHD. This study has been approved by the USF Institutional Review Board (IRB), Hillsborough County Public Schools Office of Assessment and Accountability, and the District School Board of Pasco County Office of Accountability, Research, and Measurement.

- ✓ What participation requires: Participation involves completing questionnaires about your child with ADHD. Specifically, you will indicate how well or often the student demonstrates skills associated with self-advocacy. Completion of the questionnaires is expected to take approximately 20-30 minutes. Additionally, 20% of participants will be randomly selected to complete one part of the questionnaire a second time approximately two weeks later (to provide support for the reliability of the SAMY). This second round is estimated to take 10 minutes to complete.

- ✓ Why you should participate: We need to gain a better understanding of the development of self-advocacy skills in youth with ADHD. The information that you provide will increase knowledge about the typical self-advocacy skills of these students and how to measure youth's ability to self-advocate. Participants that complete all of the materials on time will automatically receive a $2 gift card. They will also be entered into a random drawing for 1 of 2 $50 gift cards. Additionally, all participants who are selected and complete a shorter follow-up questionnaire will receive a $5 gift card.

- ✓ Confidentiality of your responses: There is minimal risk for participating in this research. Your privacy and research records will be kept confidential to the extent of the law. You have been assigned a participant code number as a means of keeping your identifying information separate from your responses and to protect the confidentiality of your responses. Your identifying

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information will be stored separately from your responses, kept in a password protected location, and will not be shared with anyone outside of the USF research team for this study. Authorized research personnel, the USF Institutional Review Board and staff, and other individuals acting on behalf of USF may inspect records from this research project; however, your individual responses will not be shared with school personnel or anyone other than the USF research team.

- ✓ What will happen with the information you provide: Your responses will be combined with other participants' responses to provide support for the use of the SAMY to measure the self-advocacy skills in youth with ADHD. This information will also be used to help inform educators, psychologists, parents, and students about the typical self-advocacy skills of students at different school levels. The results of this study may be published. However, published results will not include your name or any other information that would in any way personally identify you.

- ✓ Contact me with any questions: If you have any questions about this study, you may contact me at TheSAMYstudy@gmail.com or (813) 974-1048. If you have questions about your rights as a person taking part in this research study, you may contact a member of the Division of Research Compliance of the University of South Florida at (813) 974-5638.

- ✓ To participate: Your decision to participate in this research study is completely voluntary. If you choose not to participate, or if you withdraw participation at any point during the study, this will in no way affect your relationship with the student's school, USF, or any other party. Completion of the attached questions and forms is considered your consent to participate in this study.

Thank you for your time,

Carolyn (Carrie) Adams, SSP, NCSP
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