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The Validation of The Self Advocacy Skills Inventory Beta

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The Validation of the Self-Advocacy Skills Beta

by

Richard Aaron Chapman

A dissertation submitted in partial fulfillment
of the requirement for the degree of
Doctor of Philosophy in Curriculum and Instruction
with a concentration in Counselor Education
Department of Leadership, Counseling, Adult, Career, Higher ED
College of Education
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DEDICATION

This dissertation is dedicated to my parents, David, Iris, and Nancy Chapman. Thank you for teaching me to believe in myself and having high expectations for me and my sister, Gwen.

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It would be a mistake if I did not acknowledge the people that have helped me along the way to complete my PhD. In reality, I believe that getting a PhD is not a solo journey, but requires people to invest in you and mentor you along the way. I have a lot of people that I need to thank that have helped me and supported me and mentored me along the way. So bear with me for a minute or you can skip to Chapter 3, where I talk about statistics that are fancy and sophisticated. My methodologist says that is not a technical term.

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ABSTRACT

This study is meant to explore the psychometric properties of The Self-Advocacy Skills Inventory Beta. The Beta is a measurement of self-advocacy skills for individuals with different disabilities. This dissertation presents the results of a confirmatory factor analysis, as well as an examination of reliability of the Beta as well as its scales. The results of the confirmatory factor analysis indicated that the theorized factor structure of The Self-Advocacy Skills Beta did not fit the data. However, the Self-Advocacy Skills Inventory Beta is measuring self-advocacy skills reliably. Implications for counseling education and future development of The Self-Advocacy Skills Beta are discussed.

CHAPTER 1: INTRODUCTION

The purpose of this chapter is to introduce the study focusing on the measurement of self-advocacy skills of individuals with disabilities. This study is a continuation of an ongoing effort to develop The Self-Advocacy Skills Inventory (Chapman, 2017). The Self-Advocacy Skills Inventory has been in development for the past couple of years. A detailed description of the development process of the inventory is provided in Chapter 2 of this proposal. Briefly, this inventory measures self-advocacy skills in individuals with disabilities. This inventory has been tested with a population of college students with disabilities. In a study related to the psychometric properties of the inventory, a conclusion was reached that the inventory needed to be refined to be more accessible to individuals with a variety of disabilities. The Beta is currently being used in a program evaluation context of a participatory action research project. In the psychometric study (Chapman, 2019) a two-factor model was generated based on an exploratory factor analysis. This model suggested two factors, one being leadership, the other being the ability to advocate for individualized services. The purpose of this study is to refine The Self-Advocacy Skills Inventory Beta and to conduct a confirmatory factor analysis based on a two-factor model theorized by Chapman (2019).

Background

There has been an emphasis placed on individuals with disabilities in the counseling profession. For example, the code of ethics for the American Mental Health Counseling Association states that counseling professionals need to empower individuals with disabilities

whenever possible (American Mental Health Counseling Association, 2020). The American Counseling Association is in the process of adapting a set of counseling competencies regarding counseling individuals with disabilities (The American Counseling Association, 2018). Based on information in these two documents, the American Counseling Association and the American Mental Health Counseling Association have emphasized the important role that counselors play in empowering individuals that have disabilities. In addition, there has been increased recognition of the need for multiculturally competent counselors. The American Counseling Association has developed a set of counseling competencies specifically designed to address multicultural and social justice issues in counseling. These competencies call for counseling professionals, to assist clients in the development of self-advocacy skills.

The promotion of self-advocacy and self-determination in individuals with disabilities has become a major emphasis for state and federal policy (Tassé et al., 2020). In recent years, there has been a call from a variety of stakeholders, including researchers in self-advocacy and self-determination, and from self-advocates, for increased research in self-advocacy and self-determination on the part of individuals with disabilities (Shorgen et al., 2015; Tassé et.al. 2020). For example, in 2011 and 2012 the Administration on Developmental Disabilities conducted a series of summits for self-advocates with intellectual and developmental disabilities. The results from this listening process have been cited in a report that was produced for the Administration on Community Living (Caldwell et al., 2011). This report emphasized that self-advocates want control over their own lives. It also called for the need to raise expectations for individuals with disabilities around employment and community living. Self-advocates stated that there needs to be changes with stigmatizing and outdated language, such as the use of the phrase “mentally retarded,” instead of intellectual disability.

Problem Statement

Counselors play a role in empowerment of clients and in teaching self-advocacy skills. As previously stated, both the American Mental Health Counseling Association and the American Counseling Association have placed emphasis on self-advocacy through the development of counseling competencies and their code of ethics, respectively. With this increased role for counselors in empowerment and the teaching of self-advocacy skills, there is a lack of quality assessments designed specifically for counselors to measure their clients' self-advocacy skills. While there are measurements for the related constructs of self-determination, such as the Self-Determination Inventory (Shogren, 2015; Shogren, 2017), there is a lack of measurements specifically for self-advocacy skills as defined by Test et.al. (2005a). According to Test et.al. (2005a), self-advocacy is defined as “having a knowledge of self, knowledge of rights, communication, and leadership.”

Purpose

This study is meant to continue to develop a measurement of self-advocacy skills with college students who have disabilities. The Self-Advocacy Skills Inventory was designed to be used with individuals with a wide variety of disabilities (Chapman, 2017). In research conducted by Chapman and his colleagues (2018), a conclusion was reached that The Self-Advocacy Skills Inventory needed to be tested on a larger and more diverse group of individuals with disabilities. Therefore, the purpose of this study is to further refine The Self-Advocacy Skills Inventory Beta and confirm the factor structure proposed by Chapman (2018) with a population of college students with disabilities. A secondary purpose of this study is to see if The Self-Advocacy Skills Inventory Beta can correlate with other instruments related to self-advocacy that measure related constructs such as self-determination.

Study Assumptions

The study population includes individuals with learning disabilities, physical impairments, and mental health disabilities. These individuals are over the age of 18, and presently not under a guardianship.

The following assumptions will be made:

1. Individuals with disabilities will possess a variety of abilities as related to self-determination and self-advocacy.
2. Increased self-advocacy and self-determination will lead to improvements in quality of life for individuals with disabilities.
3. Individuals with disabilities want to live self-determined lives.
4. The Self-Advocacy Skills Beta is designed for individuals over the age of 18, that have a wide variety of disabilities.
5. The Self-Advocacy Skills Beta is not appropriate to assess individuals with an intellectual disability.
6. The Self-Advocacy Skills Beta has shown to be reliable with college students that have disabilities.
7. Self-determination and self-advocacy are related concepts.
8. It is important for individuals with disabilities to possess both self-determination and self-advocacy skills.

Conceptual Framework

Figure 1. depicts the conceptual framework for this study.

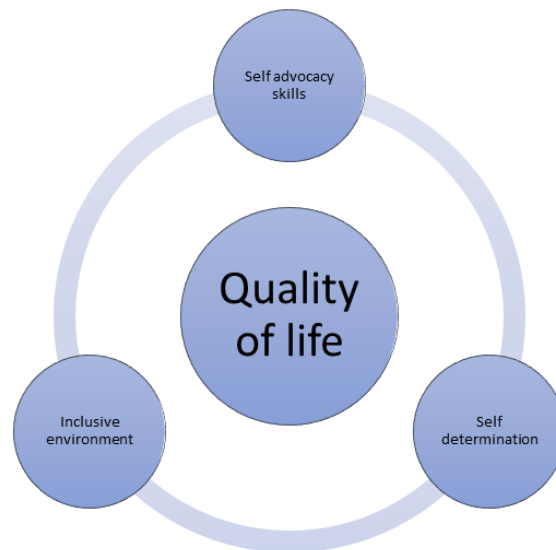


Figure 1. An overall framework of quality of life for individuals with disabilities.

To promote a higher quality of life in individuals with disabilities, disability professionals need to support self-advocacy skills, self-determination skills, and an inclusive environment. All these constructs interact with one another to achieve a high quality of life. This framework is in line with the theoretical framework that is proposed in Chapter 2 of this dissertation (Shogren et al., 2015; Thompson 2010) and is meant to create a system of supports for individuals who have disabilities.

For the purpose of this conceptual framework, disability professionals are those that provide supports and services to individuals that have disabilities. These individuals could include direct-support professionals, which could include supportive living and supported employment coaches. Also, this could include different types of counselors that might interact with individual who have disabilities, such as mental health counselors, rehabilitation counselors, and school counselors.

Significance of the Study

This study will contribute to the existing literature on self-advocacy and the assessment of self-advocacy skills. The development of The Self-Advocacy Skills Inventory will assist counseling professionals in the assessment of self-advocacy skills in individuals who have disabilities, which may improve outcomes. For example, if an individual with disabilities is found to be low on the ability to advocate for individualized services, then a service provider or the counselor could assist them by targeting areas that the individual would need to improve their overall self-advocacy skills. From a measurement perspective, this study will add to the existing literature on the assessment of self-advocacy skills in individuals with disabilities.

Research Questions

The three research questions for this study are:

1. How well does The Self-Advocacy Skills Inventory Beta, align with a two-factor model proposed by Chapman (2018), with college students who have disabilities?
2. How reliable is The Self-Advocacy Skills Inventory Beta and each of its scales?
3. What is the correlation between The Self-Advocacy Skills Inventory Beta scales and a measurement of self-determination, specifically The Arc Self-Determination Scale – adult version?

Limitations

The following limits to this study should be noted:

1. Participants will not be randomly selected from a national sample.
2. There will not be a comparison made between race, sex, ethnicity, or age groups.

3. This sample is excluding individuals who may have more complex disabilities for example, those individuals who may be subject to an adult guardianship or individuals with an intellectual disability.

Key Definitions of Terms

Confirmatory Factor Analysis: A statistical analysis used to estimate and evaluate a model that relates items responses to hypothesized latent constructs.

Disability: Throughout this study, the term disability will be defined using the American Disabilities Act's definition. The ADA defines disability as:

1. A physical or mental impairment that substantially impacts one or more life major activities.
2. A record of such of an impairment.
3. Being recorded as having such an impairment.

Intellectual Disability: This study will use the definition of the American Association for Intellectual and Developmental Disabilities definition; Intellectual Disability is a disability characterized by significant limitations in both intellectual functioning and in adaptive behavior, which covers many everyday social and practical skills. This disability originates before the age of 18.

Self-advocacy: David Test defined Self-Advocacy as “having a knowledge of self, knowledge of rights, communication, and leadership” (Test, Fowler, Brewer, Wood, Brewer, & Eddy, 2005a).

Self-Determination: Self-Determination is defined as “acting as the primary causal agent in one's life” (Shogren, Wehmeyer, Palmer, Forber-Pratt, Little, & Lopez, 2015).

Self-advocacy Skills: Skills related to having a knowledge of self, knowledge of rights, communication, and leadership, as defined by David Test (2005a, 2005b).

Complex Disabilities: Those individuals that have extensive support needs.

Causal Agent: The person that makes things happen in one's own life.

Chapter Summary and Overview

Chapter 1 provides the necessary background of this study with a focus on the statement of the problem and the significance of this study. The purpose of this study and the research questions are discussed, followed by some key definitions and an overview of the theoretical framework.

Chapter 2 will focus on a review of relevant literature including an overview of the three theoretical frameworks for the study, followed by an overview of Self-Advocacy Theory and the measurement of Self-Advocacy. Chapter 3 will focus on methodologies for the study and will begin with a restatement of the research questions, followed by the description of the measures that will be used in the overall methodology of the collection and the analysis of the data, as well as sample size adequacy.

The results of this study will be presented in Chapter 4. A discussion and implications for counselors and disability studies will be provided in Chapter 5.

CHAPTER 2: LITERATURE REVIEW

The purpose of this chapter is to present literature related to the study. The theoretical foundations of this study are rooted in Causal Agency Theory, a theory of self-determination. Because constructs of self-advocacy relate to Causal Agency Theory, the theory was selected to provide the theoretical foundation of the Self-Advocacy Skills Inventory Beta. Additionally, I will explore the role of counselors in the promotion of self-advocacy skills. Finally, I will discuss the psychometric standards utilized in the assessment of self-advocacy skills and provide an overview of The Self-Advocacy Skills Inventory Beta and the steps that led to the development of this inventory.

Causal Agency Theory

Causal Agency Theory was developed by scholars in the field of intellectual and developmental disabilities in 2002. Causal Agency Theory was subsequently updated in 2015. Causal Agency Theory is a theory of self-determination, primarily used with individuals with disabilities. Self-determination is defined within Causal Agency Theory as “acting as the primary causal agent in one’s life” (Shogren et al., 2015). In other words, self-determination is the ability to assert control over one’s own life. Causal Agency Theory is a reconceptualization of the functional model of self-determination. The promotion of self-determination for individuals with intellectual and developmental disabilities is considered a best practice in the disability field (Shogren, Wehmeyer, Palmer, Forber-Pratt, Little, & Lopez 2015). There has been extensive empirical research around self-determination and this model of self-determination.

According to Shogren et al. (2015), a component of Causal Agency Theory is self-determined action. A self-determined action is the ability to control one's own behavior. There are three essential aspects of self-determined action: volitional action, causal action, and action control beliefs. A volitional action states that self-determined individuals act voluntarily. They are making a conscious choice based on their own individual preferences. It should be stated that this voluntary action is intentional and self-initiated. Action control beliefs state that those individuals that live self-determined lives have a sense of empowerment. They have the capability to freely choose their goals and accomplish them. This concept suggests that individuals have the capability to act in empowered and self-directed ways (Shogren, et al., 2015).

So how does one develop the ability to be able to direct their own lives? According to Shogren et al. (2015), it's important to state that according to Causal Agency Theory, self-determination is developed throughout the lifespan. Self-determination begins to emerge in adolescence and there are several things that can be done to enhance self-determination in an individual. This includes the ability to make choices, express preferences, solve problems, self-regulate one's actions, and acquire self-advocacy skills, (Shogren, et al., 2015; Shogren, & Shaw, 2016; Shogren et al., 2020). This theory has been both a foundation of The Self-Determination Inventory, and Self-Determined Learning Model of Instruction or the SDLMI. The SDLMI is an evidence-based practice based on Causal Agency Theory (Shogren et al., 2019).

A related concept to self-determination is self-advocacy. Test et al. (2005b) laid out four components of self-advocacy: Having a knowledge of self, knowledge of rights, communication, and leadership. Having knowledge of self relates to knowing one's own interests, preferences, strengths, needs, learning style, and attributes of an individual with a disability. Having

knowledge of rights includes knowing one's rights as a citizen, as an individual with a disability, and as a student receiving services under the Individuals with Disabilities Education Act, as well as the Americans with Disabilities Act. Communication includes skills such as negotiation, persuasion, and compromise as well as understanding through language and listening skills. The component of leadership involves learning the roles and dynamics of a group, as well as how to function in a group. Leadership includes standing up for the rights of a group (Test et al., 2005a).

Quality of Life and Supports

According to Shalock et al. (2002), self-determination is a key component of a high quality of life. Therefore, I will begin with a discussion of quality of life and its relation to self-advocacy and self-determination. It should be noted that “quality-of-life” is a construct that is found in the field of intellectual and developmental disabilities (Shalock et al., 2002, 2021).

According to Thompson et al. (2009), “supports are strategies aimed to promote the development, interests and personal well-being of a person and that enhance human functioning. A support need is a psychological construct referring to the pattern in intensity of supports necessary for a person to participate in activities linked with normative human function” (Thompson et al., 2009, p. 135).

The definition of quality of life, provided by Shalock and his colleagues (2002), includes eight components of quality of life: emotional well-being, interpersonal relations, material well-being, personal development, physical well-being, self-determination, social inclusion, and rights (Shalock et al., 2002). These key definitions lay out the modern systems of supports advanced by the American Association for Intellectual and Developmental Disabilities. In recent years, they have developed assessments such as the Supports Intensity Scale, designed to assess what type of supports will be needed for an individual to achieve a high quality of life (Thompson et al., 2015;

Thompson et al., 2016). This is a shift away from the medical model of disability, which focuses on deficits-based thinking, instead by asking questions regarding of what type of supports will be needed for the individual with a disability to achieve a high quality of life (Thomson et al., 2004).

Counselors' Role in the Promotion of Self-Advocacy for Individuals with Disabilities

Counselors play a vital role in supporting individuals with disabilities. In this section, the role counselors play in supporting individuals with disabilities will be discussed along with the role counselors play in supporting individuals with disabilities in the development of self-advocacy and self-determination skills.

The American Counseling Association is the largest counseling association representing professional counselors. They have taken an active role in the promotion of self-advocacy, not only for individuals with disabilities, but also for individuals from a variety of diverse backgrounds. In 2015, the American Counseling Association developed a set of multi-cultural counseling competencies designed to guide all counselors in the promotion of multicultural and social justice values. The multicultural and social justice competencies date back to 1992, when they were originally endorsed by the American Counseling Association. The 2015 document indicates that multicultural and social justice-oriented counselors, use empowerment-based approaches to address oppression experienced by marginalized clients (Ratts et al., 2016). These competencies suggest that counselors play a vital role in the development of self-advocacy skills, not only for individuals with disabilities, but for all types of clients that they may encounter.

In 2018, the American Counseling Association updated the 2003 Advocacy Competencies (Lewis et al., 2003; Toporek & Daniels, 2018). The 2018 version of the competencies articulated the various advocacy roles engaged in by counselors. According to the

competencies, counselors should collaborate with their clients in advocacy efforts. The advocacy competencies reiterate the counselors' role in the promotion of self-advocacy on behalf of clients. In addition, the advocacy competencies state that counselors should teach self-advocacy to their clients and assist with the development of self-advocacy action plans in collaboration with their clients (Lewis et al., 2003; Toporek & Daniels, 2018).

In 2017, the American Rehabilitation Counseling Association, a division of the American Counseling Association, formed a task force designed to develop a set of core competencies for all professional counselors regarding providing counseling services for individuals with disabilities. This document was endorsed by the American Counseling Association Governance Council in 2018. This document again calls for counselors to support persons with disabilities in the development of self-advocacy skills in school, the workplace, and the community. (Chapin et al., 2019)

With this call from the American Counseling Association, through its various committees and divisions for empowerment of individuals with disabilities, there is a need for counselors to be involved in the development of self-advocacy skills for individuals with disabilities. Part of the ability to develop self-advocacy skills is the need to assess self-advocacy skills in clients. There is a need for valid and reliable assessments designed to measure self-advocacy skills. This also means having reliable interventions that promote self-advocacy and self-determination for individuals that have disabilities.

Transition Issues for College Students with Disabilities

The scale under development has been researched on a population of college students that had self-identified disabilities. Individuals with disabilities face a variety of issues as they transition from high school to college. It is critical for individuals with disabilities to acquire

self-determination and self-advocacy skills as they transition. Students with disabilities need to be able to advocate for educational accommodations (Wandry, 2016), as well as to develop skills to navigate college life, such as self-care, the development of social skills, making friends, and the development of self-determination skills (Wandry, 2016).

One of the greatest transition issues for college students with disabilities is differences in federal laws for individuals with disabilities in K-12 and postsecondary settings. At the K-12 level, accommodations are governed by the Individuals with Disabilities Education Act (IDEA). The goal of IDEA is to ensure free and appropriate education for students with disabilities (Clark, 2018). Clark (2018) describes the extent to which the child with disabilities is nearly absent in the IEP decision making process, as follows:

Those procedures begin when a parent or teacher refers a child upon suspicion of a disability. If referred by the school, the school must notify and receive consent from the child's parent for an evaluation. An evaluation must include assessments in all areas of possible disability. After evaluation, a team of teachers, administrator, and clinicians, together with the parent to determine whether the child is eligible for special education services. The team must make two determinations: one, does the child live with one or more of thirteen disabilities; and two, does that disability adversely affect her academic progress. (p. 407)

However, in the post-secondary education arena, IDEA, is not the legal standard for accommodations for students that have disabilities. A task in transition, is to adjust to the different accommodation standards necessary to be successful at the college level (Kelepouris, 2014). Chan, (2016) outlines the difference between disability services at the high school and college level for individuals with disabilities. Thus, Chan (2016) states that the legal regulation between high school and higher education are different. K-12 public schools are regulated by

IDEA, while postsecondary institutions are regulated by section 504 of the Americans with Disabilities Act. The purpose of educational services for individuals with disabilities are different as well. In the K-12 environment, disability services ensure that the student has access to an individualized education, while the purpose of disabilities services at the college level seeks to eliminate discrimination by creating equal access (Chan, v, 2016).

At the postsecondary level, the onus is on the student themselves to disclose and seek accommodations (Lightner et al., 2012). Students may not even know that they are entitled to accommodations (Lightner et al., 2012). This suggests, potentially, a lack of self-advocacy skills. It is critical for high school students with disabilities to be adequately prepared for the transition to postsecondary education programs, but often this is not the case. In one study, a survey of disability coordinators at colleges in the state of New York, found that most of these coordinators felt like the students transitioning to college were not adequately prepared to self-advocate (Janiga, et al., 2002).

Quigney (2017) provided a list of suggestions concerning assisting students with disabilities in transitioning to postsecondary education. These suggestions included teaching self-advocacy and self-determination skills. Targett et al. (2013) also provided a list of suggestions concerning transition to post-secondary education. These suggestions include beginning the process of transition as soon as possible, acquiring the necessary study skills to be successful in college, and developing an understanding of the accommodations that one is entitled to in college and how to access those accommodations.

Self-Advocacy and the Self-Advocacy Movement

Self-advocacy is a related concept to self-determination. Self-advocacy is defined as knowledge of rights, knowledge of self, communication, and leadership (Test et al., 2020). Over

the last couple of decades, there has been an emergence of a self-advocacy movement that has been led by individuals with intellectual and developmental disabilities. This movement has become a priority for both state and federal governments (Tassé et al., 2020).

According to Caldwell, Aaron, and Rizzolo (2011), developmental disabilities councils have the primary responsibility of supporting self-advocacy for individuals with Developmental Disabilities. The Developmental Disabilities Act (2000) states that self-advocacy should be supported primarily by the Developmental Disabilities' Councils. The Developmental Disabilities Act requires Developmental Disabilities Councils to include a goal in their state plans to: (I) establish or strengthen a program for the direct funding of a state self-advocacy organization led by individuals with developmental disabilities; (II) support opportunities for individuals with developmental disabilities who are considered leaders to provide leadership training to individuals with developmental disabilities who may become leaders; and (III) support and expand participation of individuals with developmental disabilities in cross-disability and culturally diverse leadership coalitions. The state DD Councils have supported self-advocacy organizations for individuals with intellectual and developmental disabilities. This is not the only support self-advocacy organizations have received.

The Administration on Developmental Disabilities, an agency within the federal government, has taken a new interest in supporting self-advocates who have developmental disabilities. The University of Chicago produced a report, highlighting a series of self-advocacy summits that were sponsored by the Administration on Developmental Disabilities (Caldwell et al., 2011). The purpose of this report was to highlight how the Federal government could support self-advocates throughout the country. It also highlighted the issues and challenges that self-advocates face.

Measurement of Self-Determination

Self-determination skills are important in the lives of individuals with disabilities. Understanding self-determination is a key step in understanding and assessing self-advocacy skills. Below is a brief discussion of how self-determination has been measured.

The Self-Determination Inventory System is an assessment system that is based on Causal Agency Theory (Shogren et al., 2016; Self-Determination.org). This inventory system has been developed over the course of several studies and has sound psychometric properties (Shogren, 2017; Shogren, 2018). One such study was conducted by Shogren et al. (2017). The purpose of this study was to pilot and understand the psychometric properties of the Self-Determination Inventory-Student Report version. According to the authors, there was a need to develop a new measurement of self-determination after the conceptualization of Causal Agency Theory. The study included three research questions: 1) Do characteristics of self-determined action (i.e., volitional action, agentic action, and action-control beliefs and attitudes) demonstrate good model fit for adolescents with and without disabilities (i.e., does measurement invariance hold)? 2) Do personal characteristics (i.e., age, gender, and race/ethnicity) predict the three essential characteristics of self-determined action of adolescents with and without disabilities? and 3) Are there latent differences (i.e., variances, covariances/correlations, and means) in the essential characteristics in adolescents with and without disabilities?

This study population was 176 adolescents with disabilities and 135 adolescents without disabilities. Data collection was from seven states throughout the United States. All study participants were asked to fill out the Self-Determination Inventory. A detailed description of how the inventory was developed is found in the article. The final draft of the inventory included 50 items. To handle missing data, a full maximum likelihood estimation was used. The analysis

was conducted using M-Plus. Overall, the results of the study indicate that this inventory aligned well the theoretical frameworks of Causal Agency Theory. The overall model fit was acceptable with model fit being, $\chi^2(34) = 63.861$, RMSEA=.075, CFI=.976, TLI=.960 and SRMR=.038.

The promotion of self-determination and self-advocacy has become an emphasis for the federal government (Tassé et al., 2020). One of the ways that the federal government has done this is by supporting research projects related to transition and disability. In one such project (Gaumer Erickson et al., 2015), the relationship between academic achievement and self-determination was examined using the results from a large national study regarding transition for individuals with disabilities. Specifically, this study looked at two research questions: 1) Is there a direct relationship between self-determination and academic achievement for adolescents with intellectual disabilities? 2) Is self-determination a good predictor of academic achievement for adolescents with intellectual disabilities?

The data from this study was from the National Longitudinal Transition Study. This study was designed to track individuals with disabilities in transition regarding the relationship between academic achievement and self-determination. Participants for this study included 480 individuals with intellectual disabilities. Specifically, the Woodcock Johnson III was used as the measure of academic achievement. Academic achievement was defined in terms of reading and math achievement. To assess self-determination, this study used the Arc Self-Determination Scale. The original Arc Self-Determination Scale is 72 items.

The results of the study indicated that there is a relationship between self-determination and academic achievement. This study also found that students with high levels of autonomy, self-realization, and empowerment exhibited higher levels of academic achievement. This study

indicated that the proposed model fit the data. However, it should be noted that there are no fit indices stated.

Another study from the National Longitudinal Transition Survey focuses on self-determination and disability (Shogren & Shaw, 2016). The purpose of the study was to explore how self-determination predicts quality of life for youth with disability, and in doing so, examines three domains of self-determination: autonomy, self-realization, and psychological empowerment. This study explored the extent to which these three domains predict outcomes for youths with disabilities.

Shogren and Shaw's (2016) study had a large data set regarding transition outcomes for students with disabilities. This analysis looked at all 10 disability categories in the data set. The data set included the Arc Self-Determination scale. Data for the National Longitudinal Study were collected in five waves over a 10-year span of time. Information about the quality-of-life variable relied on responses from an interview with study participants during Wave 5.

According to the study, the initial model demonstrated reasonable fit: RMSEA of 0.034, and a comparative fit index of 0.785. In the model, higher levels of psychological empowerment predicted lower levels of financial support and higher levels of employment, emotional well-being, and postsecondary education for individuals with high incidence disabilities. Higher levels of empowerment also predict lower levels of financial support for individuals with intellectual and cognitive disabilities. Also, there was a positive relationship between autonomy and inclusive residential options. This suggests that increased levels of self-determination predict an improved quality of life for individuals with disabilities. Based on information in the study, one could predict that a higher level of self-advocacy for individuals that have successfully transitioned into post-secondary education would obtain better academic outcomes.

Scale Development Process

As previously stated above, there are specific measures related to self-determination but not self-advocacy. This study is a measurement development study. The final section of this chapter will provide an overview of psychometric theory and psychometric issues specifically related to assessing self-advocacy with individuals with intellectual and developmental disabilities. This section will also focus on the development of the Self-Advocacy Skills Inventory. There is a need for assessments designed to assist counselors in the measurement of self-advocacy skills in individuals with disabilities.

Bandalos (2018), provides an overview of the scale development process. Briefly, when one chooses to develop a scale, the purpose of the scale should be stated and the domain to be assessed should be identified and defined. A determination should be made as to whether an assessment for the domain already exists. An initial item pool should be created, and a review of items and a large-scale pretest of items conducted. Items should be analyzed, revised, if necessary, and reliability calculated. Items should again be field tested, validation studies conducted, and guidelines for administration prepared.

Description of the Self-Advocacy Skills Inventory

The Self- Advocacy Skills Inventory was created in the fall of 2016 by researchers at the University of South Florida (Chapman, 2017). This inventory was created to measure self-advocacy skills in individuals with disabilities. The following steps were used in the creation of the inventory. A literature review was conducted and no instruments specifically measuring self-advocacy were found. A review of inventories for related constructs, such as those related to self-determination (e.g., the Arc Self-Determination Inventory), was also conducted. After reviewing the self-determination instruments, items were generated that aligned with the

definition of self-advocacy provided by Test et al. (2005a), which indicates that self-advocacy is composed of knowledge of self, knowledge of rights, communication, and leadership. A total of 18 items were generated, of which individual items aligned with knowledge of self, knowledge of rights, communication, or leadership. This generated a pool of 18 items and those items were reviewed by a panel of four people consisting of one self-advocate, two experts around self-advocacy and self-determination research, and one disability professional. Each of the four reviewers indicated that each of the 18 items appeared reasonable for measuring self-advocacy. Consequently, no changes were made to the items prior to administering the items to 99 college students with disabilities sampled from an intensive research institution in the Southeast U.S. in the spring of 2017. An exploratory factor analysis was run, which led to preliminary identification of two factors and the identification of three items that did not load onto either factor. These items were then revised.

Pilot Testing of the Self-Advocacy Inventory

The 17-item Self-Advocacy Inventory with revised items was tested on a group of 75 college students with disabilities. None of the students enrolled in the study were diagnosed with an intellectual disability. The research team conducted an exploratory factor analysis using SAS 9.4 to test our hypothesis that a relationship between observed variables and underlying latent self-advocacy constructs. The first five eigenvalues were: 5.10, 1.67, .501, .365, and .226. Using Kaiser's criterion of eigenvalues above one and the scree plot, the initial solution consisted of two factors. However, the research team wanted to compare the simple structure of the two-factor model to a three-factor and four-factor model. The resulting three- and four-factor models did not have a simple structure, did not have an enough items per factor, or the factors were uninterpretable. From this, the research team concluded the two-factor model was the preferred

model. Three of the items that had been revised either did not have the required .40 loading or did not simply load onto one of the two factors. The team used a cutoff of .40 for factor loadings based on Henson and Roberts (2006) analysis of current practices regarding exploratory factor analysis. The three items that did not meet this threshold were subsequently deleted. The team then reran the two-factor model after excluding the deleted items.

The final analysis indicated a two-factor model is the best fit for the data. This determination was made using Kaiser's Criterion, as well as utilizing the resulting scree plot. For this round of analysis, all loadings reached the required .40 level. All items simply loaded onto one of the two factors, and all factors were interpretable. One factor was interpreted as advocacy for individual services and was composed of nine items. The other factor was interpreted as leadership and was composed of five items. To calculate the reliability of the inventory, the research team computed Cronbach's alpha which resulted in a value of .88 which suggests high reliability. Additionally, two more estimates of Cronbach alpha were done, one for each subscale. Subscale reliability was .86 and .83, for advocacy for individual services and leadership, respectively.

The advocacy for individual services factor had an eigen value of 5.1, and explained 70% of the total variance, and the leadership factor had an eigen value of 1.67 and explained 23% of the variance, with a cumulative explained variance of 93%. The average loading for the first subscale was .63, with a range from .78 to .44. The average loading for the second subscale was .7, with a range from .50 to .89.

The results indicated in this study suggests that The Self-Advocacy Skills Inventory is a promising assessment to measure self-advocacy skills in individuals that have a disability. However, the results of this study also indicated the need for further development and refinement

of The Self-Advocacy Skills Inventory and a need for it to be tested on a wider population of college students to conform the factor structure. The study has been presented at several conferences and meetings (Chapman at al., 2017; Chapman at al., 2018). The development of The Self-Advocacy Skills Inventory is ongoing.

Chapter Summary

This chapter began with an overview of the theoretical foundations of the study, with a focus on the literature surrounding Causal Agency Theory. This chapter next focused on self-determination in federal policy, with a focus on emerging research that promotes self-determination in the lives of individuals that have disabilities. A framework promoted by the American Association for Intellectual and Developmental Disabilities is also discussed. This chapter ends with a discussion of measures of self-determination, the scale development process, and an overview of the development of the Self-Advocacy Skills Inventory.

CHAPTER 3: RESEARCH METHODS AND DESIGN

Introduction

The focus of this chapter is on the research design and methods of this current study. This chapter will begin with a restatement of the research questions and a description of the proposed study population. Next, a description of the Self-Advocacy Skills Inventory and the Self-Determination Inventory-Student Report version will be provided. Data collection and analysis procedures will also be discussed. In Chapter 1, the research questions that will guide this study were presented. In this chapter, a plan to address the research questions will be articulated.

Restatement of the Research Questions

In Chapter 1 the following research questions were discussed:

1. How well does The Self-Advocacy Skills Inventory Beta, align with a two-factor model proposed by Chapman (2018), with college students that have disabilities?
2. How reliable is The Self-Advocacy Skills Inventory Beta and each of its scales?
3. What is the correlation between The Self-Advocacy Skills Inventory Beta scales and a measurement of self-determination, specifically the arc Self-Determination scale – adult version?

Proposed Study Population and Sampling Procedures

The study population consisted of college students with disabilities over the age of 18. College students were recruited from services programs for students with disabilities found on

two college campuses in the southeastern part of the United States. This recruitment strategy is similar to previous research related to The Self-Advocacy Skills Inventory.

As previously stated, the sample for this study was derived from disability services offices that are located on college and university campuses from the southeastern states. The director of the office of disability services of college and university campuses from the southeastern states were contacted over email, regarding participation in the study. They were asked to send out the survey link to students that were registered in their offices for participation in this study.

Sample Size

Given that the primary research questions involved the completion of a confirmatory factor analysis, guidelines regarding adequate number of participants needed to conduct a confirmatory factor analysis were studied. Bandalos (2018), was consulted in the determination of the adequacy of the sample size. I determined that a sample size of 150 participants would be the minimum. The target number of participants for this study was 200 participants. This was based on Bandalos (2018), assumption that with strong factor loadings of least 0.8, the minimum sample size of 100 individuals would be necessary to perform an adequate confirmatory factor analysis.

The Development of The Self-Advocacy Skills Beta

The Self-Advocacy Skills Beta was the instrument for this study. The Self-Advocacy Skills Beta (Chapman & Buck, 2019) is a cognitively accessible inventory designed for individuals with intellectual and developmental disabilities. The Beta is a modified version of the original 14 item inventory. The Beta was simplified from the original 14-item version for cognitive accessibility and then reviewed by two self-advocates for accessibility purposes. These

two individuals are people with lived experiences as persons with intellectual disabilities. They are employed at a University Center of Excellence in Developmental Disabilities in the midwestern part of the United States. Additionally, the Self-Advocacy Skills Beta was reviewed by two Ph.D. psychologists, both of whom are experts in the field of intellectual disabilities, and one of whom is an expert in self-determination for individuals with disabilities. This led to some suggestions that were then incorporated into the final version of the Beta, mainly related to the wording of the questions. They suggested simplifying the wording of the questions so that respondents could understand. The Beta revised The Self-Advocacy Skills Inventory to make it easier for individuals with disabilities to read and comprehend. The Beta was administered on the same platform as the Self-Determination Inventory Student Report Version. This made The Self-Advocacy Skills Inventory Beta more accessible for individuals with a wide variety of disabilities to read and comprehend.

The Self-Advocacy Skills Inventory Beta is used as a program evaluation tool in a participatory action research project. The Self-Advocacy Skills Beta is presented in Appendix II. The Self-Advocacy Skills Inventory Beta is designed to be accessible for a wider audience, including those individuals who struggle with reading.

As a preliminary step before the collection of any data utilizing the Beta, a panel of three experts were convened around self-advocacy, including individuals within disabilities. This panel was asked to sort each question of the Beta into the four domains of self-advocacy as outlined by Test et al. (2005a) and sort the items into the two domains (advocacy for individualized services and leadership).

Description of the ARC Self-Determination Scale – Adult Version

The ARC Self-Determination Scale-Adult Version (Wehmeyer & Bolding 1995) is a measure of self-determination that has been validated to be use with adults with primarily developmental disabilities. However, the scale can be used with all individuals that have disabilities. According to the measure, the scale has two primary purposes. These are to provide a tool that assesses individual strengths and areas of supports needed for self-determination and to provide a research tool that examines the relationship between self-determination and the factors that promote or inhibit self-determined behavior. The scale is a 72-item scale that was divided into four sections. For the purposes of this analysis, this study only utilized the psychological empowerment subscale.

The ARC Self-Determination Scale-Psychological Empowerment Subscale was selected as a measure to correlate with the Self-Advocacy Skills Inventory. It was hypothesized that there would be a positive correlation between the ARC Self-Determination Scale-Empowerment Subscale and the Self-Advocacy Skills Inventory. A copy of the subscale is found in Appendix III.

Study Demographics

This study collected demographic information that is similar to the information that was collected in previous studies involving the inventory. The demographic questionnaire is attached in Appendix IV of this document.

Data Collection Procedures

Data for this study were collected using Qualtrics. Both the Self-Determination Scale and The Self-Advocacy Skills Inventory Beta were uploaded into a secured online platform. Participants were sent a survey link including The Self-Determination Scale – Psychological

Empowerment, The Self-Advocacy Skills Beta, and the demographics survey. They were sent the survey link if they were receiving services from the office of students with disability services at a college campus. The principal investigator has contacts at various institutions around the southeastern states. Students received an email twice over a one-month period from the office of students with disability services on their college campus.

Before any data were collected in this study, the IRB approved the study in accordance with their policies. Similar to other studies on The Self-Advocacy Skills Inventory, this study obtained an exempt status from the IRB.

Data Analysis

As a preliminary data analysis step before the confirmatory factor analysis, a KMO and Bartlett's test of Sphericity was calculated to determine sampling adequacy. Additional preliminary analyses were performed to examine the distributions for all measures (frequency distributions for items and mean, SD, skewness, and kurtosis for scales).

Statistical analyses: This study used the following methods to address the research questions:

1. How well does The Self-Advocacy Skills Inventory Beta, align with a two-factor model proposed by Chapman (2018) and shown in Figure 2:

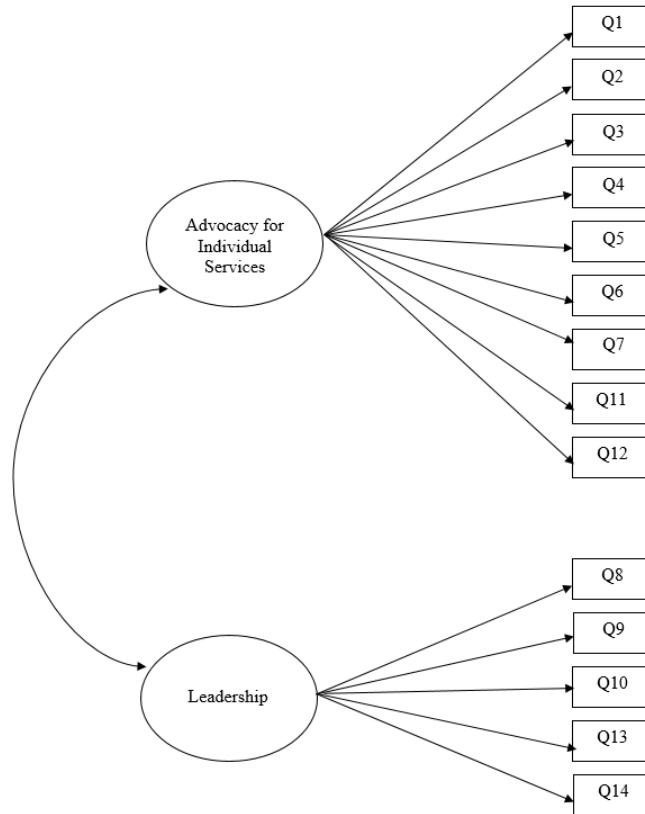


Figure 2. Proposed Two-Factor Model.

To assess this question, a confirmatory factor analysis was used. Chapman (2018) previously came up with a two-factor model through the utilization of an exploratory factor analysis. A diagram of this model is listed in Figure 1. In the confirmatory factor analysis, this project utilizes a proposed guideline for evaluation of model fit outlined by (Hu & Bentler, 1998), focusing on the RSEMA, the comparative fit index, the standardized root mean square residual, and the Tucker Lewis Index to estimate overall model fit. The guidelines in Table 1 will be used to assess overall model fit.

Table 1. Fit Indices Guidelines

Measure of Fit	Guideline
χ^2 and degrees of freedom	Not Statistically Significant ($p > .05$)
Comparative Fit Index (CFI)	$> .95$
Tucker Lewis Index (TLI)	$> .95$
Root Mean Square Error of Approximation (RMSEA)	$< .06$
Standardize Root Mean Residual (SRMR)	$< .08$

Note: Adapted from Hu, L.-t. & Bentler, P. M. (1998)

This confirmatory factor analytic model was estimated using a maximum likelihood estimation via M-plus 8. Missing data was handled using M-plus 8's default maximum likelihood estimation. SAS was used to calculate the demographics and the standardized root mean square residual. The model had poor fit, so we explored potential modifications to the model to include error covariances.

2. How reliable is The Self-Advocacy Skills Inventory Beta and each of its scales?

To examine the reliability of The Self-Advocacy Skills Inventory Beta, Cronbach's alpha was calculated to assess reliability for the whole inventory, and then to assess reliability of each of the subscales. Given the nature of the instrument, Cronbach's alpha is appropriate to estimate overall reliability. This analysis was conducted utilizing SAS.

3. What is the correlation between The Self-Advocacy Skills Inventory Beta scales and a measurement of self-determination, specifically the Self-Determination Inventory – Student Version?

To test this research question, I utilized a person product correlation between the overall score of The Self-Advocacy Skills Inventory Beta and total score of the Self-Determination Inventory – Student Version. In addition, I calculated a Pearson product moment correlation for

each subscale of The Self-Advocacy Skills Inventory Beta and the Self-Determination Student Report. I conducted this analysis using SAS.

Chapter Summary

This chapter presented the plan used to carry out the dissertation research. The chapter began with a restatement of the research question, and then described the population and sampling procedures. It then provided a description of the inventories that were used in this study, as well as how they were administered. An analysis plan was discussed to articulate the plan used for data analysis.

CHAPTER 4: RESULTS

Introduction

This chapter presents the results for this study. This chapter begins with a discussion of the demographics of study participants. Information about descriptive statistics for each of the measures is presented followed by a description of the sample size adequacy and the results of each research question.

Demographic Information

Table 2 presents information related to the age of study respondents. Most respondents were under the age of 25 $N = (70)$. Fourteen respondents reported that they were between the ages of 25 to 30. Table 2 provides a complete listing of the ages of participants.

Table 2. Respondent Age Group

Q23 Respondent Age Group	Number	Percent
Not reported	19	.
25-30	14	12.0
30-45	21	18.0
45+	12	10.3
Under 25	70	59.8
Total	117	100.0

Table 3 provides a breakdown of the respondents' reported disability. The most frequently report disability was a learning disability (31%) followed by a physical disability (24%). Some respondents reported that they had some combination of disabilities. It should be noted that respondents had the ability to select multiple disabilities.

Table 3. Respondent Reported Disability

Q24 Respondent Reported Disability	Frequency	Percent
Not reported	19	.
Autism	7	6.0
Autism, Mental Health Disability	2	1.7
Learning Disability	36	30.8
Learning Disability, Autism	1	0.9
Learning Disability, Mental Health Disability	7	6.0
Mental Health Disability	26	22.2
Physical Disability	28	23.9
Physical Disability, Learning Disability	3	2.6
Physical Disability, Learning Disability, Autism, Mental Health Disability	1	0.9
Physical Disability, Learning Disability, Mental Health Disability	2	1.7
Physical Disability, Mental Health Disability	4	3.4
Total	117	100.0

Table 4 presents information related to respondent’s race or ethnicity. The majority, 61.2% respondents reported that they were white, 15.5% reported that they were black and 15.5% reported that they were Hispanic. Another race or ethnicity group was reported by 7.8% of respondents.

Table 4. Respondent Reported Race/Ethnicity

Q25 Respondent Reported Race/Ethnicity	Number	Percent
Not reported	20	.
Black	18	15.5
Hispanic	18	15.5
Other	9	7.8
White	71	61.2
Total	116	100.0

Table 5 presents information related to student level. It was found that 76.7% of participants that responded reported being undergraduate students and 23.3% of participants that responded reported being graduate students.

Table 5. Respondent Reported Student Level

Q26 Respondent Reported Student Level	Number	Percent
Not reported	20	
Graduate Student	27	23.3
Undergraduate Student	89	76.7
Total	116	100.0

Table 6 reports whether or not survey respondents were first generation college students.

Most students, coming to 65.8%, reported that they were not first-generation college students.

Table 6. Respondent Reported First Generation College Student

Q25 Respondent Reported First Generation College Student	Number	Percent
Not reported	19	.
No	77	65.81
Yes	40	34.19
Total	117	100

Item Statistics for the Self-Advocacy Skills Inventory

Table 7 presents the mean, standard deviation, skewness, and kurtosis of each item in The Self-Advocacy Skills Inventory. Question 1 had the highest mean and was negatively skewed.

Question 12 had the lowest mean and was positively skewed.

Table 7. Survey Item Means, Standard Deviations, Skewness, and Kurtosis

Variable	N	M	SD	Skewness	Kurtosis
Q1	132	4.4318	0.7636	-1.2287	0.8990
Q2	132	3.5682	1.1134	-0.1910	-1.3121
Q3	132	4.2576	0.7875	-0.9686	0.6693
Q4	132	4.2727	0.7725	-0.8178	0.1036
Q5	126	3.8968	0.9106	-0.5681	-0.3811
Q6	126	4.0000	0.9960	-0.5924	-0.7875
Q8	125	4.2160	0.8091	-0.6942	-0.3328
Q9	126	4.1349	0.8519	-0.5789	-0.6057
Q10	124	4.0000	0.7963	-0.5891	0.1096
Q11	124	3.1855	1.1573	0.4294	-1.2895
Q12	124	3.1694	1.3111	0.4948	-1.5405
Q13	124	3.5323	1.2906	-0.0609	-1.7099
Q14	117	3.4444	1.3483	0.1308	-1.7978

Item correlations for the inventory are presented in Table 8. All of the items correlated in The Self-Advocacy Skills Inventory Beta. The strongest correlation was between Question 3 and Question 4 at 0.812 and the weakest correlations were between Question 9 and Question 13 at .015.

Table 8. Table of Correlations

Item	Q1	Q2	Q3	Q4	Q5	Q6	Q8	Q9	Q10	Q11	Q12	Q13	Q14
Q1	1	0.230	0.245	0.304	0.031	0.124	0.104	0.260	0.287	0.040	0.073	0.083	0.038
Q2	0.230	1	0.311	0.307	0.192	0.251	0.293	0.187	0.303	0.030	0.195	0.016	0.079
Q3	0.245	0.311	1	0.812	0.371	0.283	0.521	0.431	0.357	0.129	0.068	0.180	0.143
Q4	0.304	0.307	0.812	1	0.324	0.268	0.513	0.376	0.382	0.155	0.058	0.165	0.076
Q5	0.031	0.192	0.371	0.324	1	0.335	0.417	0.358	0.311	0.248	0.096	0.247	0.043
Q6	0.124	0.251	0.283	0.268	0.335	1	0.403	0.415	0.277	0.247	0.062	0.044	0.052
Q8	0.104	0.293	0.521	0.513	0.417	0.403	1	0.322	0.323	0.145	0.057	0.139	0.135
Q9	0.260	0.187	0.431	0.376	0.358	0.415	0.322	1	0.300	0.233	0.033	0.015	0.077
Q10	0.287	0.303	0.357	0.382	0.311	0.277	0.323	0.300	1	0.273	0.062	0.150	0.073
Q11	0.040	0.030	0.129	0.155	0.248	0.247	0.145	0.233	0.273	1	0.397	0.249	0.280
Q12	0.073	0.195	0.068	0.058	0.096	0.062	0.057	0.033	0.062	0.397	1	0.206	0.470
Q13	0.083	0.016	0.180	0.165	0.247	0.044	0.139	0.015	0.150	0.249	0.206	1	0.266
Q14	0.038	0.079	0.143	0.076	0.043	0.052	0.135	0.077	0.073	0.280	0.470	0.266	1

Sampling Size Adequacy and Missing Data

Table 9 presents information on sampling size adequacy. Bartlett's test of sphericity presented in Table 9 led us to reject the null hypothesis of no common factors (chi-square (610.423, df = 78), $p < .0001$), and the Kaiser-Meyer-Olkin measure of sampling adequacy was found to be 0.802. This analysis suggests that there was a sufficient sample to proceed with a

confirmatory factor analysis. For the questions involving a factor analysis, missing data was dealt with using maximum likelihood function.

Table 9. KMO and Bartlett's Test Results

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.802
Bartlett's Test of Sphericity	Approx. Chi-Square	610.423
	Df	78
	Sig.	0

Question 1:

Question 1 addresses the confirmatory factor analysis of The Self-Advocacy Skills Inventory Beta. It seeks to answer the question: How well does The Self-Advocacy Skills Inventory Beta, align with a two-factor model proposed by Chapman, 2018?

To determine if the theoretical model fit of the data, several factors assisted with the determination of model fit. Table 10 presents information related to overall model fit of the original proposed model. Based on the guidelines outlined in Chapter 3, which suggested that good fit is evidenced by CFI > .95, TLI > .95, RMSEA < .06, and SRMR < .08, the proposed model did not fit the data. Of note the CFI was .877 and the TLI was .850, which were both lower than the threshold of .95. In addition, the RMSEA and SRMR were too high.

Table 10. Original Model Fit

Fit Statistic	Value	Degrees of Freedom	P-value
Chi-square test of model fit	334.158	64	0.000
Root Mean Square Error of Approximation (RMSEA)	0.174		
Comparative Fit Index (CFI)	0.877		
Tucker Lewis Index (TLI)	0.850		
Standardized Root Mean Square Residual (SRMR)	0.115		

Because the obtained fit indices do not meet the threshold levels for good fit, the parameter estimates from the original model should be interpreted with caution. They are provided in Table 11 so that the reporting is complete.

Table 11. Original Model Parameter Estimates

Domain	Item	Estimate	Standard Error	Estimate/SE	p-value
F1-Advocay	Q1	1.000	0.000	.	.
	Q2	1.690	0.360	4.698	0.000
	Q3	2.876	0.572	5.029	0.000
	Q4	2.818	0.557	5.056	0.000
	Q5	2.247	0.452	4.974	0.000
	Q8	2.335	0.471	4.958	0.000
	Q11	1.956	0.410	4.767	0.000
	Q12	1.954	0.424	4.609	0.000
F2-Leadership	Q6	1.000	0.000	.	.
	Q9	0.889	0.083	10.738	0.000
	Q10	0.643	0.093	6.902	0.000
	Q13	0.726	0.098	7.380	0.000
	Q14	0.842	0.109	7.749	0.000
Model Variances	F1 By F2	0.207	0.046	4.469	0.000
	F1	0.108	0.043	2.518	0.012
	Advocacy	0.498	0.069	7.171	0.000

Based on all of the information in this analysis, the model that was hypothesized was not supported by the data. After looking at the suggestions provided by M-Plus model modification indices, it was determined that item 11 may be too redundant with item 12. These two items

shared variance beyond what could be explained by the underlying factor. Thus item 11 was removed, and the model was modified as shown in Figure 3.

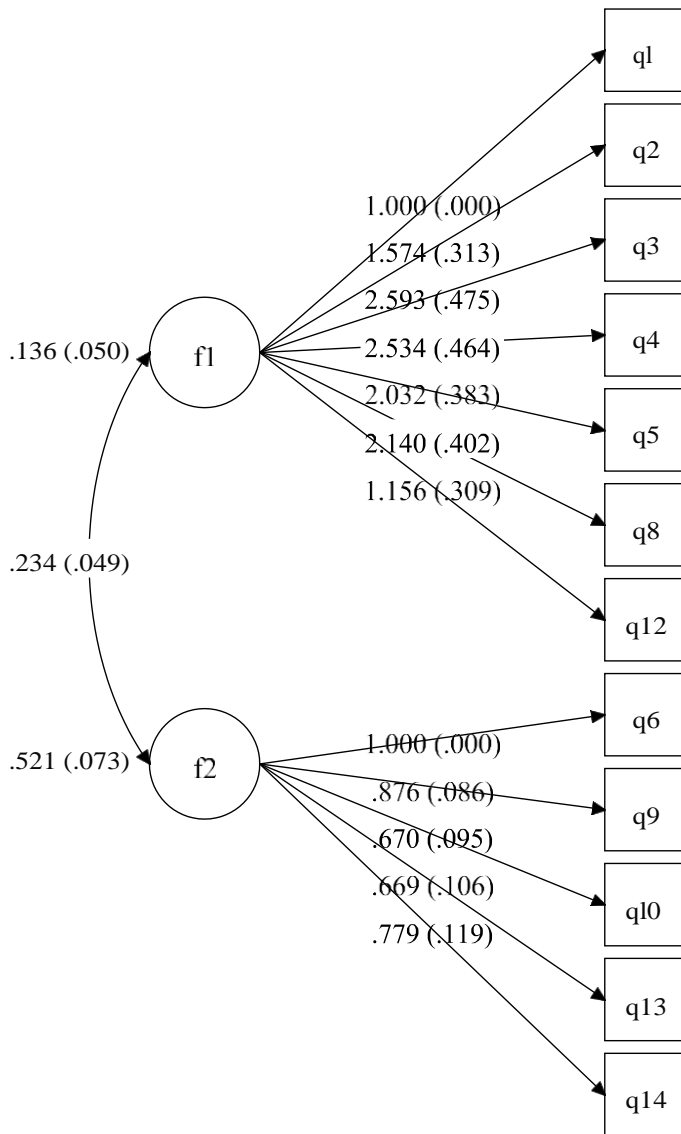


Figure 3. Final Two-Factor Model.

Table 12 provides the revised fit statistics for the revised model. The CFI and the TLI in the revised model were higher and the RMSEA and SRMR were lower, however the revised model still did not meet threshold values for acceptable fit. This suggests that the correlations between the items are not fully explained by the two hypothesized underlying factors.

Table 12. Final Model Fit

Fit Statistic	Value	Degrees of Freedom	P-value
Chi-square test of model fit	197.221	53	0.000
Root Mean Square Error of Approximation (RMSEA)	0.139		
Comparative Fit Index (CFI)	0.930		
Tucker Lewis Index (TLI)	0.913		
Standardized Root Mean Square Residual (SRMR)	0.101		

Table 13 provides the revised parameters for the revised model.

Table 13. Final Model Parameter Estimates

Domain	Item	Estimate	Standard Error	Estimate/SE	p-value
F1-Advocay	Q1	1.000	0.000	.	.
	Q2	1.574	0.313	5.025	0.000
	Q3	2.593	0.475	5.455	0.000
	Q4	2.534	0.464	5.455	0.000
	Q5	2.032	0.383	5.310	0.000
	Q8	2.140	0.402	5.328	0.000
	Q12	1.156	0.309	3.746	0.000
F2- Leadership	Q6	1.000	0.000	.	.
	Q9	0.876	0.086	10.195	0.000
	Q10	0.670	0.095	7.065	0.000
	Q13	0.669	0.106	6.287	0.000
	Q14	0.779	0.119	6.571	0.000
Final Model Variances	F1 By F2	0.234	0.049	4.763	0.000
		0.136	0.050	2.732	0.006
		0.521	0.073	7.124	0.000

Question 2

Question 2 sought to answer the question: How reliable is The Self-Advocacy Skills Inventory Beta and each of its scales? To calculate the reliability of the inventory, I computed Cronbach's alpha, which resulted in a Cronbach alpha of .82 which suggests high reliability. In addition, Cronbach alpha was calculated for both subscales for the inventory. The advocacy for individualized services scale received a Cronbach alpha of .778. The leadership subscale received a Cronbach alpha of .638.

Question 3

Question 3 sought to answer the question: What is the correlation between The Self-Advocacy Skills Inventory Beta scales and a measurement of self-determination, specifically the Self-Determination Inventory – Student Version? For the study, we examined the overall Pearson product moment correlation between the two instruments, the hypothesis being that there is a positive correlation between the two instruments. The correlation between The Self-Advocacy Skills Inventory Beta and the Arc Self-Determination Scale-Psychological Empowerment Subscale is 0.358, which suggests that the Beta is moderately correlated with the Psychological Empowerment subscale of the ARC.

Chapter Summary

This chapter presented the results of the study. The findings suggest that the proposed factor structure, even after revision, did not meet proposed threshold. However, the Self-Advocacy Skills Beta is measuring the data reliably according to the alpha values. The next chapter will focus on the discussion and the implications for future research and the counseling profession.

CHAPTER 5: DISCUSSION

Introduction

The focus of this chapter is to provide a discussion for the overall dissertation study. This chapter will begin with a discussion of overall study limitations, followed by a discussion of each research question. Next, opportunities for future research regarding The Self-Advocacy Skills Inventory Beta are explored. Finally, the chapter concludes with implications for counseling, education, and supervision.

The research on The Self-Advocacy Skills Inventory Beta occurred in the middle of the Covid-19 pandemic. The effects of the global pandemic have required research to be conducted in different ways around the globe. This was especially true for this project. The research site was closed in the middle of March, which required a delay in data collection and analysis. Because of the global pandemic, modifications had to be made to the data collection process. Disability support offices at the two universities stated that they would only send the survey once a semester. It was also communicated with the researcher that students may not be checking their email in the summertime. These factors may have contributed, in some part, to study participation.

Another limitation was the sample size of the study. This study achieved 137 respondents. This sample size is not enough to draw any conclusions as it relates to the model as proposed in question 1. Additionally, there was some missing data and not every individual responded to all the questions.

Another limitation that should be noted is the lack of a representative sample in this study. Most respondents were white and undergraduates. It may be difficult to generalize the survey to other populations. It should be noted that most survey respondents self-reported having a physical or a learning disability. This presents a limitation and raises questions to the overall design of the inventory.

Some survey respondents did not complete every item on the survey. A hypothesis for this phenomenon is that while self-advocacy is important for college students with disabilities, the respondents may have had difficulty with identifying themselves as members of a self-advocacy group. This may explain why the data did not fit the model as previously hypothesized. A reconstruction of this model tailored specifically for college students might need to occur. It should also be noted that this was the beta version of The Self-Advocacy Skills Inventory, that was not part of the initial exploratory factor analysis. In future research, it may be useful to modify this measurement to remove information that references self-advocacy groups for this population of students enrolled at a university. Students might have difficulty with identifying as members of a self-advocacy group. This was an error in the conceptualization of leadership and self-advocacy. What is meant by this is involvement in a self-advocacy group will resonate better with individuals who have an intellectual disability than college students with disabilities because the self-advocacy movement was founded by individuals with intellectual disabilities. It is also important to note that college students might not necessarily identify themselves as having a disability, even if they are receiving accommodations. This could explain some of the differences in the conceptualization self-advocacy skills with this population.

Overall, the findings suggested that the proposed model did not fit the data. However, The Self-Advocacy Skills Beta is measuring consistency reliably with college students that have

disabilities. Additionally, discussion about findings and the implications for counseling education are presented below.

Question 1

As discussed in Chapter 4, the initial hypothesized model had poor model fit and needed to be modified. The modifications were based on some of the questions being redundant and the need for some of the questions to be removed. There are several hypotheses to explain the model fit issue. It should be noted that this was the first time that the Self-Advocacy Skills Inventory Beta was used in a study that was not an evaluation. Previous research has used an unmodified version of the Self-Advocacy Skills Inventory. It is possible that additional research is needed to confirm the factor structure that was theorized.

Additionally, the hypothesized factor structure is not fully explaining the relationships among the items. It is explaining some of the relationships, but not all of the relationships. A hypothesis regarding this, is that there may be some similarities among the items, thus leading to correlations beyond what the factor structure can explain.

Although the sample size was adequate for the study, there is a possibility that a larger sample size, would change the results of this study. Additional research should continue to explore the factor structure of The Self-Advocacy Skills Inventory. Expanding the sample size, could help conform the factor structure.

Additionally, as noted, The Self-Advocacy Skills Inventory Beta has been used almost exclusively in evaluation contexts with individuals who have intellectual and developmental disabilities. Using a modified version of the inventory with college students may not have been appropriate, given the population. It is possible, that the way self-advocacy skills are conceptualized in college students is different compared to individuals who have intellectual

disabilities. Additional studies are needed with The Self-Advocacy Skills Inventory and The Self-Advocacy Skills Inventory Beta to determine the appropriateness of each measure.

Question 2

The information collected in the study is in line with data collected in the pilot studies of the Self-Advocacy Skills Inventory. In one study of the inventory, the Cronbach's alpha was .83. Additionally, two more estimates of Cronbach alpha were done, one for each subscale. Subscale reliability was .86 and .83, respectively.

It should be noted that the Cronbach's alpha for the leadership subscale is a little bit lower than the overall model. There may be some valid explanations for this phenomenon. When self-advocacy was initially conceptualized in this study, the construct of self-advocacy was inspired by the self-advocacy movement. This movement, as previously discussed, is directed by individuals who may have an intellectual or developmental disability. Using this leadership subscale on the college student population may be inappropriate, given how leadership is conceptualized in this population. Students with disabilities may have difficulty with identifying themselves as members of a self-advocacy group or a disability group.

Based on this information, The Self-Advocacy Skills Inventory Beta should be reconceptualized with college students in mind to pull out the information related to involvement in self-advocacy organizations and focus on leadership questions specifically for college students. The advocacy subscale had a higher Cronbach's alpha, than the leadership subscale. Additional research is needed to explore whether or not this could be a standalone scale specifically used with college students who have disabilities. Additional research is needed with this population. Based on this information, modifications could be made to The Self-Advocacy Skills Inventory Beta to provide more relevant information as it relates to college students that

have disabilities. Suggestions for potential modifications could be including information related to the ability to advocate for accommodations through disability support offices and involvement with student activities on the college campus.

Question 3

As discussed in Chapter 4, there was not a strong correlation between the ARC Self-Determination Scale-Psychological Empowerment subscale and The Self-Advocacy Skills Inventory Beta. It should be noted however that there was a positive correlation between the two scales. However, it was initially hypothesized that there would be a much stronger correlation between the scales. There are a variety of hypotheses to explain this outcome. It should be noted that the ARC Self-Determination Scale has had limited use with college students with disabilities. This is one possible explanation of the lack of a strong correlation between the 2 subscales.

In addition, only one subscale in the ARC Self-Determination Scale was used. It is possible that this was a mistake when this study was initially conceptualized. Although self-determination is a related concept to self-advocacy, it is possible that a different subscale should have been used in this study. Additional research is needed to explore if using the full ARC Self-Determination Scale would make a difference in achieving a stronger correlation with The Self-Advocacy Skills Inventory Beta.

The ARC Self-Determination Scale was chosen because it has been shown to be a reliable instrument in the measurement of self-determination for individuals with disabilities. As previously stated, this instrument was originally developed in 2005. In recent years, it has been used in additional studies. Additional research should explore whether using a different measure

of self-determination would make a difference in establishing The Self-Advocacy Skills Beta's ability to have a relationship with other variables, and the validity with other instruments.

Conceptual Framework Based on the Study

A concept of how individuals with disabilities become empowered was proposed in Chapter 1. This conceptual framework needs to be developed over time. The experiences with this study have led to some changes in this framework. Empowerment of individuals with disabilities is critical to their success throughout the course of their lives. Self-advocacy and self-determination play a critical role in helping individuals with disabilities become empowered over the course of their lifetimes. In one sense that part of the conceptual framework has not changed. However, based on the results of the study something needs to be constructed to account for how college students with disabilities develop self-advocacy skills over the course of a lifetime. The literature suggests that the development of self-advocacy skills and self-determination builds over the course of lifetime (Shogren et al., 2017; Wehmeyer et al., 2017). We need to assume that college students might not understand self-advocacy and self-determination the same way as individuals with intellectual disabilities. Additional study is needed to understand how college students with disabilities understand self-advocacy throughout their daily lives. As previously stated, individuals with intellectual disabilities led to the creation of the self-advocacy movement for individuals with disabilities. College students might not be able to identify themselves as a member of a self-advocacy group. The meaning of self-advocacy for college students is the ability for them to speak up for themselves.

This research emphasizes the importance of inclusion in the conceptual framework. Having access to inclusive environments is a key to improved quality of the life for individuals with disabilities. If individuals with disabilities can increase their ability to live self-determined

lives and be self-advocates, one could hypothesize that they would have increased access to an inclusive environment and improved quality of life. Being able to accurately measure these kinds of steps will lead to greater college access and overall functioning for individuals with disabilities. This could be translated to specialized programs for individuals that have intellectual disabilities.

Future Directions for Research

Additional research is needed to fully develop the Self-Advocacy Skills Inventory. The next steps in the development of The Self-Advocacy Skills Inventory are to modify the inventory for this specific population and conduct additional studies to confirm the factor structure that was revised in this study.

There are a couple of options that need to be further explored when considering modifications to the Self-Advocacy Skills Beta. One option is to not retain the Leadership Factor since this factor had poor reliability and was not accurately measuring the concept of leadership. This will allow for further research to be on the advocacy for Individualized Services Factor, which is the strongest factor currently in the Self-Advocacy Skills Beta.

Another option would be to keep the Leadership Factor but develop additional survey items to more accurately capture the concept of leadership in the Self-Advocacy Skills Inventory Beta. This would make for a more robust instrument and allow us to collect additional data for the fuller concept of self-advocacy.

The purpose of this study was to conduct a confirmatory factor analysis of the Self-Advocacy Skills Inventory. The results have initially indicated the instrument is reliable in measuring two areas of self-advocacy: leadership skills and the ability to advocate for individualized services. The next step in the scale development process is to modify The Self-

Advocacy Skills Inventory to be used with college students that have disabilities. This could include adding, removing, or modifying existing items that are found in The Self-Advocacy Skills Inventory and The Self-Advocacy Skills Inventory Beta.

After revising The Self-Advocacy Skills Inventory, a new factor structure will need to be established, along with establishing reliability of the revised instrument. It will also need to be determined if The Self-Advocacy Skills Inventory has a relationship with other instruments.

The next step in the scale development process is to complete a confirmatory factor analysis with additional students based on the finalized model. Further steps would be to norm this instrument with college students who have disabilities and to explore utilizing the inventory with individuals who have more complex disabilities, such as those residing in institutionalized settings, those with complex communication needs, and those in special education environments.

The Beta needs to be retested with students who have an intellectual or developmental disability. It is hypothesized that the model that has been used initially will work with individuals who have an intellectual or a developmental disability.

The process of scale development is ongoing and The Self-Advocacy Skills Inventory Beta will be further developed in future research. Additional studies need to explore utilizing The Self-Advocacy Skills Inventory Beta with a more diverse and complex sample of individuals with disabilities. Up until this point, research on The Self-Advocacy Skills Inventory Beta has been on individuals with disabilities that are college students enrolled in disability services offices throughout a southeastern state. This is a significant limitation in this research. Research on The Self-Advocacy Skills Inventory Beta needs to continue and below are suggested directions for future research utilizing the Self-Advocacy Skills Inventory System.

As previously stated, The Self-Advocacy Skills Inventory Beta needs to be developed for specific populations. One of these populations is college students with disabilities. The leadership subdomain needs to be reconceptualized to specifically target leadership skills that college students with disabilities possess. There needs to be an examination between the correlation between The Self-Advocacy Skills Inventory Beta and related measures of self-determination. Additional research on The Self-Advocacy Skills Inventory Beta should include establishing a relationship with self-determination assessments such as the Self-Determination Inventory. This inventory is considered to be the gold standard for the measurement of self-determination in individuals that have disabilities. It is currently being used in several large-scale randomized control trials examining self-determination and individuals that have disabilities.

Besides testing the inventory with college students who have disabilities, there is a need to expand the research on the inventory to other populations as well. These populations include individuals with serious mental illness, as well as individuals with an intellectual or developmental disability. This inventory should be analyzed with diverse individuals with disabilities who are not college students. This would expand in the use of The Self-Advocacy Skills Inventory Beta.

Self-advocacy is a component of self-determination, as conceptualized in Causal Agency Theory (Shogren, 2015). The Self-Determined Learning Model of Instruction has been established as an evidence-based practice to teach middle school and high school students both with and without disabilities self-determination skills. The Self-Determined Learning Model of Instruction has been tested in several large scale randomized controlled trials with students, both with and without disabilities. A future direction of research could be utilizing The Self-Advocacy Skills Inventory Beta, as an assessment tool in the implementation of the SDLMI.

Another application of The Self-Advocacy Skills Inventory Beta is in guardianship and alternatives to guardianship. In recent years, this has become an emerging area of advocacy and research in disability policy. Individuals with disabilities have asked for increased self-determination and the ability to make decisions that affect their own lives. Guardianship limits autonomy of individuals with disabilities and their ability to make choices (Chapman, 2019). There has been a growing movement towards the utilization of alternatives to guardianship to support individuals with disabilities to make decisions for themselves, with the supports they need, without the need for a guardian. The Self-Advocacy Skills Inventory Beta could be used as a tool to examine deficits in decision making abilities for individuals with disabilities, and provide valuable information for families, service providers, and other professionals to improve decision making for individuals with disabilities.

Even with alternatives to guardianship, such as supported decision making and other practices designed to enhance decision making capability, there is still a need for guardianship. Commonly, a mental health assessment is needed to place someone under a guardianship. This assessment normally includes an interview by a mental health professional, as well as some type of assessment. The Self-Advocacy Skills Inventory Beta could be used in a forensic context to assess decision making ability and help inform guardianship assessment. Additional research is obviously needed for the utilization of The Self-Advocacy Skills Inventory Beta in a forensic context.

Based on the results of this study, additional development and refinement is needed for The Self-Advocacy Skills Inventory Beta. The Self-Advocacy Skills Inventory Beta is measuring self-advocacy skills consistently, but there needs to be ongoing work in the factor structure of The Self-Advocacy Skills Inventory Beta. For example, the reliability of the leadership subscale

from The Self-Advocacy Skills Inventory Beta could be improved with additional questions and an examination of how the questions for the overall instrument is structured. This might include completing additional exploratory or confirmatory factor analysis as a way to conform the overall factor structure.

Implications for Counseling, Counseling Education and Supervision

The results of this study indicate a greater need for the development of instruments that will assess both self-advocacy skills and self-determination skills in individuals that have disabilities. As discussed in Chapter 2, the promotion of self-advocacy skills is recognized as a clinical practice guideline by the American Counseling Association and as an ethical mandate in the code of ethics of the American Mental Health Counseling Association (2020). This recognition by these professional organizations is relatively new and resources need to be developed to have counseling professionals implement this mandate. There is a lack of resources and knowledge translation in the counseling field around providing counseling services to individuals that have disabilities. Holistic resources and models should be developed to address these mandates. Self-advocacy and self-determination are both holistic ways of addressing the needs of individuals that have disabilities.

The counseling guidelines that have been developed by the American Counseling Association about providing counseling to individuals with disabilities should be best practice guidelines for counseling professionals. These guidelines are meant to be a guide for counseling professional that will allow them to gain new knowledge in providing counseling to individuals that have disabilities. If counseling professionals are supposed to support the development of self-advocacy skills in individuals who have disabilities, then it is important that we have adequate tools to promote self-advocacy.

Having assessment tools is only one piece of the puzzle in the promotion of self-advocacy and self-determination in a clinical context. There needs to be the development of clinical models that will allow for counselors to provide support to clients in the development of self-advocacy and self-determination. As previously discussed, the SDLMI is considered an evidence-based practice in schools, that allow for the promotion of self-determination. Since the SDLMI is already an established evidence-based practice, one could envision adapting the SDLMI as an intervention that could be utilized in both individual and group counseling. This should be the future direction of research as additional counseling interventions are developed to increase both self-determination and self-advocacy in individuals that have disabilities.

As identified in Casual Agency Theory, self-determination skills are not just for individuals with disabilities, but for everyone. Currently self-determination skills instruction is being implemented in inclusive classroom environments for students with and without disabilities. Additional research is needed to develop interventions designed to increase self-determination, self-advocacy, and decision-making skills to support students with and without disabilities.

Self-advocacy and self-determination skills need to be integrated in psychotherapy and counseling practice. Self-determination and self-advocacy skills fall within a positive psychology framework and focus on empowerment of individuals. Increasing self-advocacy skills could be a powerful intervention to integrate into the counseling environment. Use of these inventions can improve the lives of individuals with and without disabilities.

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APPENDIX I: THE SELF-ADVOCACY SKILLS INVENTORY ORIGINAL VERSION

Questions:	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I feel that I have the right to approve all services that I receive					
I know what to do when I have problems because of my disability					
I can make good decisions about what services I need					
I know what services I need					
I know how to take the lead in looking for services that help me					
I feel that I can work in a cooperative manner with individuals who provide services to me					
I can work with agencies to decide what services I need					
I can get information to help better understand my disability					
I know the definition of self-advocacy					
I am aware of Self-Advocacy or disability organizations within my own community.					
I have had the opportunity to become a member of a Self-Advocacy or disabilities group					
I am a member of a Self-Advocacy or disabilities group					
I am involved in leadership of my Self-Advocacy group					
I have been educated about my rights as an individual with a disability					

APPENDIX II: SELF-ADVOCACY SKILLS INVENTORY BETA

Item	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I have the right to approve services that I get.					
2. I know what to do when I have problems due to my disability.					
3. I can make good decisions about what services I need.					
4. I know what services I need.					
5. I know how to look for services that help me.					
6. I can work well with people who provide services to me.					
7. I can work with agencies to decide what services I need.					
8. I can get information to help me understand my disability.					
9. I know how to define self-advocacy.					
10. I know about local Self-Advocacy or disability groups.					
11. I have had the chance to join a Self-Advocacy or disabilities group.					
12. I am a member of a Self-Advocacy or disabilities group.					
13. I am a leader of my Self-Advocacy group.					
14. I know about my rights as a person with a disability.					

**APPENDIX III: THE ARC SELF-DETERMINATION SCALE, ADULT VERSION
PSYCHOLOGICAL EMPOWERMENT SUBSCALE**

1. I usually do what my friends want...or
I tell my friends if they are doing something, I don't want to do
2. I tell others when I have new or different ideas or opinions ... or
I usually agree with other peoples' opinions or ideas.
3. I usually agree with people when they tell me I can't do something ...or
I tell people when I think I can do something that they tell me I can't.
4. I tell people when they have hurt my feelings... or
I am afraid to tell people when they have hurt my feelings.
5. I can make my own decisions... or
Other people make decisions for me.
6. Trying hard at work doesn't do me much good ... or
Trying hard at work will help me get a good job.
7. I can get what I want by working hard... or
I need good luck to get what I want.
8. It is no use to keep trying because that won't change things... or
I keep trying even after I get something wrong.
9. I have the ability to do the job I want... or
I cannot do what it takes to do the job I want.
10. I don't know how to make friends... or

I know how to make friends

11. I am able to work with others... or

I cannot work well with others

12. I do not make good choices... or

I can make good choices

13. If I have the ability, I will be able to get the job I want... or

I probably will not get the job I want even if I have the ability.

14. I will have a hard time making new friends ... or

I will be able to make friends in new situations.

15. I will be able to work with others if I need to... or

I will not be able to work with others if I need to

16. My choices will not be honored... or

I will be able to make choices that are important to me.

APPENDIX IV: DEMOGRAPHICS

How old are you?

- Under 25
- 25-30
- 30-45
- 45+

What is your disability?

- Physical Disability
- Learning Disability
- Autism
- Mental Health Disability

What is your race?

- White
- Black
- what Hispanic
- Other

How would you describe yourself?

- Undergraduate Student
- Graduate Student

Are you a first-generation college student?

- Yes
- No