Spring 2020

Development and Validation of the Students With Learning Disabilities School Counselor Self- Efficacy Scale: A Psychometric Study

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DEVELOPMENT AND VALIDATION OF THE STUDENTS WITH LEARNING DISABILITIES SCHOOL COUNSELOR SELF- EFFICACY SCALE: A PSYCHOMETRIC STUDY

by

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A Dissertation Submitted to the Faculty of
Old Dominion University in Partial Fulfillment of the
Requirements for the Degree of

DOCTOR OF PHILOSOPHY

COUNSELOR EDUCATION AND SUPERVISION

OLD DOMINION UNIVERSITY
May 2020

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ABSTRACT

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Rawn Alfredo Boulden, Jr.
Old Dominion University, 2020
Chair: Dr. Christopher Sink

School Counselors play an important role in the success of all students. The American School Counselor Association (ASCA) and the Council for The Accreditation of Counseling And Related Educational Programs (CACREP) emphasizing the importance of school counselors in supporting the diverse needs of all students. Despite the efforts of the aforementioned association and accrediting body, the verdict is mixed regarding school counselors' self-efficacy to counsel and support students with learning disabilities. This quantitative study aimed to develop and validate the Students with Learning Disabilities School Counselor Self-Efficacy Scale, an instrument that assesses school counselors' belief in their ability to counsel and support students identified as having learning disabilities. The survey was administered to 320 school counselors working in public school settings throughout the United States. The results revealed a two-factor model consisting of the following dimensions: (1) appraisal and indirect student services, and (2) instruction. The results of the MANOVA indicated group differences related to (1) school counselor age, (2) previous teaching experience, and (3) building level (i.e., elementary, middle, and high school). Psychometric properties are further explored, along with school counseling implications, limitations, and areas for future research.

This dissertation is dedicated to my ancestors,
who sacrificed and paved the way for me to earn my doctorate.

ACKNOWLEDGEMENTS

I'd like to express my gratitude to several individuals who have supported me in completing my doctorate and, accordingly, my dissertation. Firstly, I extend many thanks to my dissertation chair, advisor, and lifelong friend and colleague, Dr. Christopher Sink. Chris, I have appreciated all the support and guidance you've provided, even before I began my doctoral studies. I have learned so much from you, and I have developed skills and work habits that will serve me well in my future endeavors; I am truly a better person, as a result of your mentorship and sense of compassion—thank you, Chris. I wish you and yours a happy and fruitful retirement as you continue to settle back into life in the evergreen state. Dr. Emily Goodman-Scott, I cannot adequately express my gratitude for your unwavering support throughout my doctoral studies. From co-teaching promising future school counselors to researching issues facing school counselors, I appreciate the experiences I've gained under your purview, and I look forward to future collaborations, conference reunions, and conversations. Dr. Jude Austin, I am thankful for your mentorship and camaraderie since I began my doctoral studies. I look forward to continued mentorship and am grateful for the overwhelming amount of support you provided. Last but certainly not least, Dr. Neukrug—I would like to extend my thanks for playing a pivotal role in my doctoral studies, providing sage feedback and opportunities to enhance my research and writing skills. I am also grateful for your willingness to serve on my dissertation committee.

I would be remiss not to acknowledge the friends and colleagues who have been instrumental in my growth. I am humbled to be a part of the world's greatest doctoral cohort! Abie, Betsy, Clara, Frankie, Johana, Kat, Kira, Kyulee, Ne'shaun, & Tony, we did it! It seems like yesterday when we just started our doctoral studies. We've shared many fond memories, including long nights, arduous assignments, and perilous life challenges. I am proud to call you

all classmates, cohortmates, and friends. I'd also like to extend many thanks to Drs. Grothaus, Horton-Parker, Dice, and Ford.

Lastly, and most importantly, I'd like to express gratitude to my mother, Robin Pelt. You've provided unconditional love and support and pushed me to be better. You taught me valuable traits such as stick-to-itiveness, compassion, and fearlessness. Your love has caused me to beat the odds—earning a Ph.D. as a black man at the age of 27. Thank you for your sacrifices; thank you for paving the way so your son could even aspire to achieve greatness.

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CHAPTER ONE

INTRODUCTION

In this chapter, the researcher will provide a brief overview of the contemporary school counseling profession, including research purporting school counselors' effectiveness in promoting student success. Additionally, the researcher will provide a cursory overview of students with disabilities in United States schools. Following, the role of the school counselor in serving students with disabilities is discussed, along with a discussion of the challenges school counselors. Next, the researcher highlights self-efficacy's impact on both (1) school counselor practice and (2) student outcomes. Additionally, an overview of the problem will be provided, followed by the aim of the proposed study. Furthermore, the significance of the proposed study and an exploration of the proposed study's self-efficacy theoretical framework are summarized, respectively. Thereafter, the proposed study's research questions are specified, and the introductory material is summarized. To conclude this opening section, the key terms related to the proposed study are briefly elucidated.

Overview

School counselors play an important role in supporting all students in their academic, college and career, and social emotional development (American School Counselor Association [ASCA], 2014a). Through the implementation of a comprehensive school counseling program (CSCP), they collaborate with key stakeholders (e.g., teachers, parents/families, administrators) to address inequities in student outcomes (ASCA, n.d.-a; Kushner, Maldonado, Pack, & Hooper, 2011; Owens, Thomas, & Strong, 2011). They are highly visible members of the school community and work to ensure students' needs are being met. This narrative sharply contrasts the role of yesteryears' school counselors; previously, school counselors, often teachers or

administrators serving in a dual role, spent significant time delivering vocational guidance curricula to students and not attending to pressing student needs (Gysbers, 2010). The contemporary school counselor reflects a paradigm shift in school administrators' conceptualization of the school counselor position.

Promoting Student Success

At this juncture, substantial research exists asserting school counselors' effectiveness in promoting student success. For instance, a major study generated a positive correlation between a comprehensive school counseling program (CSCP) and student ACT scores (Carey & Dimmitt, 2012). Additionally, smaller school counselor-to-student ratios support improved student academic and behavioral outcomes, particularly for students in low-income communities (Goodman-Scott, Sink, Cholewa, & Burgess, 2018; Lapan, Gysbers, Bragg, & Pierce, 2012). School counselors also appear to be effective in (1) increasing minority access to advanced placement coursework, (2) improving students' study skills and work habits, and (3) increasing high school students' likelihood to apply to college (Bryan, Moore-Thomas, Day-Vines, & Holcomb-McCoy, 2011; Carey & Dimmitt, 2012; Davis, Davis, & Mobley, 2013). This list is certainly not exhaustive, but given sufficient opportunity and license, school counselors can meaningfully impact students' lives in a variety of ways.

Students with Disabilities

For the purpose of this study, the notion of "students with disabilities" is defined as individuals for whom special education services are necessary to assist students in living a productive and prosperous life (Kauffman & Hallahan, 2005). Students with disabilities comprise roughly 13.2% (i.e., 6.7 million) of public schools in the United States, as of the 2015-2016 school year (National Center for Education Statistics, 2018). Comparatively, in the 2014-2015 school year, students with disabilities comprised roughly 13% (i.e., six million) of all

students in public schools. This increase may be partially due to improved screening and identification measures (Milsom, 2002). Furthermore, during the 2015-2016 school year, "students with learning disabilities" comprised 34% of all students identified as having a disability as defined by the Individuals with Disabilities Education Act (2004), which is one of the largest disability categories as defined by IDEA.

With the advent of various laws and policies, public schools are mandated by the federal government to support a concept called "inclusion," formerly known as "mainstreaming." Inclusion, a concept that arose from the Individuals with Disabilities Education Act (2004), simply means allowing students with disabilities, to the fullest extent possible, the ability to learn and interact with their general education peers (Kirby, 2017). Because of this, schools have adjusted their approach to integrating students with disabilities. Gone are the days where students with disabilities were siloed away in a secluded part of the school. These students are now expected to learn and interact in the "least restrictive environment," meaning that they "receive an education and related services while still being educated in the regular classroom to the greatest extent possible" (Marx et al., 2014, p. 1). As a result of inclusion, research has noted (1) improved academic performance, (2) successful attainment of IEP goals, and (3) increased student intrinsic motivation (Eller, Fisher, Gilchrist, Rozman, & Shockney, 2015; Salend & Garrick Duhaney, 1999). Given the propensity for students with disabilities to (1) face bullying, (2) feel depressed, and (3) have suicidal thoughts, it is prudent that school staff have the necessary preparation to properly support this vulnerable population (Guetzloe, 1991; Pacer, n.d.).

School Counselors Serving Students with Disabilities

ASCA (n.d.-b) recognizes the importance of school counselors in supporting all students' needs. Given the increasing number of students with identified disabilities in schools, school counselors must be and feel prepared to provide the supports necessarily for students to not only achieve their potential in K-12 settings, but to leave the schools' purview equipped with the skills, mindset, and attitude necessary for lifelong success. Schools are becoming increasingly aware of school counselors' capacity to properly advocate for students with disabilities (Owens et al., 2011). In some cases, school counselors are the only people in the school building equipped with this skillset (Erford, House, & Martin, 2003). The litigiousness of individuals (parents, organizations, etc.) involved in special education necessitates that school counselors thoroughly understand special education procedures and have the competence to support students with disabilities (Geddes Hall, 2015; Owens et al., 2011).

School counselors are largely equipped to utilize interventions to support students with disabilities. Firstly, school counselors adhere to IDEA and other relevant policies, ensuring that services are rendered in the least restrictive environment (ASCA, 2016a). Using a CSCP, school counselors (1) deliver pertinent individual, small group, and core curriculum lessons, (2) provide short-term counseling, when deemed helpful by the child's IEP team, (3) encourage family engagement in the IEP process, (4) collaborate with key stakeholders (e.g., parents, teachers) to ascertain what interventions should be enacted to best support the child, and (5) advocate for the child's needs, and other actions. Research literature exists examining the positive impact school counselors have on students with disabilities' lives, both during their K-12 years and long-term (Krell & Pèrusse, 2018; Milsom, Goodnough, & Akos, 2007; Scarborough & Gilbride, 2006).

School Counselors and the Importance of Self-Efficacy

Research supports the idea that inadequate preparation negatively impacts self-efficacy (DeKruyf & Pehrsson, 2011; Romano, Paradise, & Green, 2009). Likewise, school counselors' self-efficacy impacts their effectiveness or ability to appropriately complete a task (Bodenhorn & Skaggs, 2005). High school counselor multicultural self-efficacy has been linked to school counselors' ability and willingness to address systemic barriers and affect positive change (Holcomb-McCoy, Harris, Hines, & Johnston, 2008). Additionally, a higher sense of self-efficacy has been linked to (1) increased likelihood to employ data-informed practices, and (2) increased collaboration with school stakeholders (Bodenhorn, Wolfe, & Airen, 2010; Bryan & Griffin, 2010; Holcomb-McCoy, Gonzalez, & Johnston, 2009). Repeatedly, the literature substantiates the notion that higher self-efficacy significantly correlates to improved student outcomes (Bodenhorn et al., 2010; Bryan & Griffin, 2010; Holcomb-McCoy et al., 2008; Holcomb-McCoy et al., 2009). The following section overviews of the problem under investigation in the study.

Statement of the Problem

ASCA (2016c, 2019a, 2019c, n.d.-a, & n.d.-b) and CACREP (2015) have developed literature emphasizing the importance of school counselors in supporting the diverse needs of all students. Several guiding documents are provided to emphasize this assertion, including (1) the ASCA National Model (2012, 2019c), (2) ASCA's "Role of the School Counselor" proclamation (n.d.-b), (3) ASCA's Ethical Standards of School Counselors (2016c), (4) ASCA's infographic discussing the contemporary role of the school counselor (n.d.-a), and (5) CACREP's (2015) 2016 standards for counselor education programs. Despite the efforts of the aforementioned association and accrediting body, the verdict is mixed regarding school counselors' self-efficacy to counsel and support students with learning disabilities (Kolodinsky, Draves, Schroder,

Lindsey, & Zlatev, 2009; Milsom, 2002; Nichter & Edmonson, 2005; Romano et al., 2009; Studer & Quigney, 2004). This lack of confidence poses a problem in school counselors' goal of "helping every student succeed," as proclaimed by the ASCA National Model (2019c, p. xi).

"School counselor self-efficacy" is operationalized as a school counselor's belief in their ability to successfully complete a requested or required task (Bodenhorn & Skaggs, 2005). Research supports the positive correlation between school counselor self-efficacy and both (1) school counselor effectiveness and (2) student outcomes (Bodenhorn et al., 2010; Brown, Olivárez, & DeKruyf, 2018; DeKruyf & Pehrsson, 2011; Ernst, Bardhoshi, & Lanthier, 2017; Mullen & Lambie, 2016; Sanders, Welfare, & Culver, 2017). Students with learning disabilities comprise a sizeable number of students in United States schools, many of whom face academic, behavioral, and post-secondary obstacles (Ginieri-Coccossis et al., 2013; Marita & Hord, 2017; McMahon, Cihak, & Wright, 2015; National Center for Education Statistics, 2018). Thus, school counselors must feel confident in their abilities to support these students.

While many studies examining school counselor self-efficacy in various contexts have been conducted, very few self-efficacy *scales* exist for measuring constructs germane to the school counseling profession (Clemons, Carey, & Harrington, 2010). Moreover, no validated instrument exists ascertaining school counselors' self-efficacy to counsel and support students with learning disabilities, considering school counselors' roles and responsibilities and the guidance provided by the ASCA National Model (2019c). Development and validation of such an instrument can help significantly inform school counselor preparation and practice. The following section outlines the intent of the proposed study.

Purpose of the Study and Overview of Data Analyses

The aim of this study is to address this gap through the development and validation of the Students with Disabilities School Counselor Self-Efficacy Scale (SLDSCSES), an instrument

that measures school counselors' self-efficacy to counsel and support students with learning disabilities. The instrument, grounded in key tenets of the ASCA National Model (2019c), supports the professional development needs of both current and future school counselors in supporting students with learning disabilities.

The researcher employs exploratory factor analysis to ascertain the degree of shared variance between the latent variable groupings (Mvududu & Sink, 2013) based on participants' (i.e., school counselors employed in public school settings) responses to Likert scale items on the developed instrument. The researcher followed Mvududu and Sink's (2013) guidelines and steps for exploratory factor analysis, including (1) item creation, (2) expert review (3) pilot testing, (4) sample size estimation, (5) full survey administration to desired sample, (6) data screening and cleaning, (7) correlational matrix to examine factorability, (8) factor extraction using principal factor analysis, (9) factor retention, (10) parallel analysis, (11), factor rotation using the oblique rotation method, (12) naming the factors, and (13) reliability analysis via SPSS. These procedures are further explained in the methodology section. Following the exploratory factor analysis, the researcher conducted a MANOVA, ascertaining possible group differences on subscale scores. The following section discusses the significance of the study.

Significance of the Study

As mentioned previously, school counselors must feel confident in their ability to work with students with disabilities. However, research suggests that school counselors have varying degrees of comfort and confidence in supporting these students (Kolodinsky et al., 2009; Nichter & Edmonson, 2005; Romano et al., 2009). Thus, an ASCA-informed Students with Learning Disabilities School Counselor Self-Efficacy Scale may address this gap and yield implications for both school counselor preparation and the school counseling profession. School counseling graduate students' performance on the self-efficacy scale could reveal both (1) gaps in field

experiences (i.e., internships and practicums), and (2) gaps in program curriculum. Conversely, performance could also reveal (1) program strengths, and (2) the extent to which the school counselor preparation program aligns with ASCA's investment in school counselors meeting the needs of *all* students. District-level school counselor supervisors could administer the survey to school counselors (maintaining their anonymity of the school counselors) to understand potential themes regarding areas of strength and areas needing improvement as it relates to increasing school counselors' self-efficacy. Through addressing critical weaknesses, supervisors may be able to lessen the likelihood of civil rights litigation or other legal concerns. The following section describes the theoretical framework that underpins the development of self-efficacy-related instrument.

Theoretical Framework

Self-efficacy refers to individuals' belief in their ability to successfully carry out a given task or procedure within a certain context (Bandura, 1977, 1986, 1997). Albert Bandura is widely considered to be the pioneer of the term. Bandura asserted that most people aim to have control over their life circumstances (Bandura, 1995). This control often begets predictability and preparedness for similar life situations or event; however, a lack of control can develop traits such as insecurity and disinterest. Both scenarios impact an individual's self-efficacy. Bandura (1995) posited that self-efficacy impacts virtual all aspects of an individual's livelihood. An individual's belief in their abilities often impact motivation and achievement (Bandura, 1992). Bandura (1995) asserted that there were four categories that comprise an individual's sense of self-efficacy: mastery experiences, vicarious experiences, social persuasion, and physiological and emotional states.

Mastery experiences, believed by Bandura to be the most effective predictor of self-efficacy, involves achieving success at accomplishing a predetermined task. These experiences

help individuals develop a "can-do" attitude toward life's challenges. Naturally, accomplishing tasks buoy self-efficacy, while failure can cause an individual's self-efficacy to deteriorate. Mastery experience places greater emphasis on the process and not the product. Bandura (1995) proclaimed that "it involves acquiring the cognitive, behavioral, and self-regulatory tools for creating and executing appropriate courses of action to manage ever-changing life circumstances" (p. 3). "Easy and quick successes" often prepare individuals for easy and quick challenges, Bandura asserted; individuals grow the most when they must persevere through prolonged challenges. If individuals do not believe in their ability to achieve a goal, they will likely not put forth great effort to achieve said goal.

Vicarious experiences mean seeing individuals, preferably within one's immediate social circle, achieve success (Bandura, 1995). If an individual observes someone else succeeding, this can increase their confidence in their ability to succeed (Bandura, 1986; Schunk, 1987). Conversely, witnessing failure can decrease an individual's self-efficacy. Modeling is a key sub-section of vicarious experiences. If an individual witnesses success by an individual with whom he cannot identify, the success will not carry as much weight as an individual with whom he can identify. Similarly, if an individual witnesses failure by an individual with whom he cannot identify, the failure will not carry as much weight as an individual with whom he can identify. Models are often identified as individuals who share similar beliefs and ideals.

Social persuasion is when other people praise someone for their accomplishments and for being competent to accomplish a given task (Bandura, 1995). Hearing external praise and commendation bolsters an individual's belief in their abilities. Bandura introduced a term called "efficacy boosters." Essentially, these are individuals who commend individuals for their accomplishments. Additionally, efficacy boosters create environmental situations that allow

others to realize their success. They also discourage individuals comparing themselves to others, instead focusing on personal accomplishments.

Lastly, physiological and emotional states represent how individuals make meaning of bodily responses to external stimuli (Bandura, 1995). For example, an individual's response to stressful situations can beget or hinder one's sense of self-efficacy. An individual's mood can also impact self-efficacy; a positive mood often supports a positive self-efficacy, while a negative mood often supports negative self-efficacy. Stress reduction, situational reframing, and other methods can help adjust an individual's self-efficacy. Individuals often monitor their bodily and physiological responses to situations, which can impact self-efficacy.

Self-Efficacy in Education. Self-efficacy has also been adapted in both teaching and school counseling contexts. Hoy and Spero (2005) operationalized "teacher self-efficacy" as a teacher's belief in their ability to positively impact student learning. Teacher self-efficacy impacts teachers' effort, goals and aspirations, zest for education, work habits, open-mindedness, flexibility, and tolerance for students' academic mistakes (Allinder, 1994; Ashton & Webb, 1986; Cousins & Walker, 2000; Gibson & Dembo, 1984; Guskey, 1988; Hoy & Spero, 2005; Stein & Wang, 1988). Further research suggested a positive relationship between teacher self-efficacy and student achievement; specifically, teachers with higher self-efficacy (1) were more open to trying new practices, (2) employ effective classroom management techniques, (3) provide greater support for lower-performing students, (4) build students' confidence in their abilities as learners, (5) set reachable goals, and (6) persevere through classroom-based challenges (Ross, 1994, 1998; Shahzad & Naureen, 2017).

Similar research has been conducted with school counselors. For example, sample investigations reported a positive relationship between school counselor self-efficacy and both

(1) student and (2) counselor outcomes (e.g., Mullen & Lambie, 2016). School counselor self-efficacy is positively related to (1) school counselors' use of the third edition of ASCA's National Model (2012), (2) commitment to ensuring equitable practices, and (3) the school counselor's perception of their work environment (Bodenhorn et al., 2010; Mullen & Lambie, 2016). Intriguing trends pertaining to categorical data have also emerged, as school counselors with teaching experience were found to have greater self-efficacy than school counselors without prior experience (Bodenhorn & Skaggs, 2005). Based on the above research context, the following research questions are posed.

Research Questions

- Does the SCSESS possess internal consistency reliability?
- Does the SCSESS demonstrate content and factorial validity?
- Using demographic variables as independent variables, do significant group differences exist on subscale scores?

Summary

Through the development, implementation, and maintenance of a comprehensive school counseling programs, school counselors support students in their (1) academic, (2) college and career, and (3) personal/social development (American School Counselor Association, 2014a). School counselor self-efficacy refers to a school counselor's belief in their ability to successfully complete a requested or required task. School counselors have reported varying levels of preparedness to support students with disabilities (Kolodinsky et al., 2009; Milsom, 2002; Nichter & Edmonson, 2005; Romano et al., 2009; Studer & Quigney, 2004). The research supports the need to further infuse special education coursework into school counseling preparation programs, along with increasing professional development experiences of practicing

school counselors (Milsom & Akos, 2003). Thus, to ascertain pre-service and practicing school counselor's self-efficacy to serve students with disabilities, particularly learning disabilities, this study aims to both (1) develop a valid and reliable students with learning disabilities school counselor self-efficacy scale and (2) determine the extent of the relationship between self-efficacy and several categorical variables (e.g., years of experience, school counselor caseload). Once developed, the scale can help fill a possible void in counselor preparation, research, and practice, better equipping current and school-counselors-in-training with the relevant knowledge, skills, and abilities to effectively support all students. The following section provides an overview of terms related to the study.

Definition of Terms

Comprehensive School Counseling Program (CSCP): A data-driven and well-articulated school counseling modality, developed by Norman Gysbers (1990) in Missouri and Robert Myrick (1993), that ensures school counselors proactively meet the academic, college/career, and personal/social needs of all students.

Council for the Accrediting of Counseling and Related Educational Programs (CACREP): A major US-based accrediting body for counseling and related educational programs.

District-Level School Counseling Supervisor: An individual who typically provides administrative leadership and supervision for school counselors in their district in developing and maintaining a quality and effective comprehensive school counseling program (ASCA, 2019b). These individuals often have years of school counseling experience and have credentials qualifying them for this role. They may also be utilized to provide informal and formal supervision to school counselors.

Individualized Educational Plan (IEP): A legally-binding document, developed by a child's IEP team, detailing the educational services the child is entitled to (Understood, 2019a).

Inclusion: A practice whereby students with disabilities are educated alongside their general education peers, to the fullest extent possible (Justice, Logan, Lin, & Kaderavek, 2014). The term is related to a formerly used notion called "mainstreaming", where students with special needs, as much as possible, were "mainstreamed" into general education classes.

Individuals with Disabilities Education Act (IDEA): Reauthored in 2004, the Individuals with Disabilities Act enacted various procedures and protocols to protect the educational rights of students with disabilities (Lipkin & Okamoto, 2015).

Least Restrictive Environment: Developed out of IDEA, this term refers the practice of placing students with disabilities, to the fullest extent possible, in the same educational environment as their general education peers (Marx et al., 2014).

Self-Efficacy: An individual's belief in their ability to successfully carry out a given task or procedure within a certain context (Bandura, 1977, 1986, 1997).

School Counselors: Certified or credentialed educators who generally (1) have at least a master's degree with a concentration in school counseling, (2) fulfill state and local continuing education requirements, and (3) follow all relevant ASCA and American Counselor Association (ACA) codes (ASCA, n.d.-a).

Special Education: Instructional methods and educational practices developed to meet the needs of students with disabilities (State of Washington Office of Superintendent of Public Instruction, 2016).

Students with Disabilities: Individuals for whom special education services are necessary to assist students in living a productive and prosperous life (Kauffman & Hallahan,

2005). Students falling within this category either (1) have at least one of the 13 disabilities listed in IDEA or (2) need specialized educational services to satisfactorily progress through school (Understood, 2019b).

The following chapter contains a detailed literature review. The presentation builds off the information shared in the introduction, adding salient context to this complex topic. First, the researcher will provide an historical backdrop regarding the United States' efforts to adequately support students with disabilities. Additional insight will be provided regarding (1) how special education law has impacted school counseling, (2) the prevalence of students with disabilities in public schools in the United States, and (3) unique challenges of students with disabilities and ,more specifically, those students with learning disabilities. Next, the researcher outlines the components of the ASCA (2019c) National Model, relating it to school counselors' support of students with learning disabilities. Following, the researcher will discuss ASCA's vision of the school counselor's role in assisting students with disabilities, including the integration of multitiered systems of support. Lastly, the researcher will explore critical gaps in school counselor preparation and practice that may impact school counselors' ability to counsel and support students with learning disabilities.

CHAPTER TWO

LITERATURE REVIEW

In this chapter, the researcher begins with a broad discussion of individuals with disabilities, followed by an overview of the United States' efforts to properly education youth with disabilities. Key disability legislation is addressed, followed by discussion on its impact on the school counseling profession. Next, statistics citing the prevalence of students with disabilities in United States public schools are reported. Thereafter, the researcher will describe the unique challenges of students with disabilities. Following, students with learning disabilities, the focus of the survey, will be discussed. Afterward, the researcher will provide an overview of the ASCA National Model and the role of the school counselor in supporting students identified as having disabilities. Following, the researcher will discuss self-efficacy and its impact on both student and school counselor outcomes. Lastly, pre-service preparation of school counselors is addressed.

Individuals with Disabilities

The Americans with Disabilities Act (1990) defined a disability as either "a physical or mental impairment that substantially limits one or more major life activities of such individual," "[having] a record of such impairment," or "being regarded as having such impairment" (p. 7). The United States Census (2017) reported that roughly 40 million people, comprising nearly 13% of the United States population, have a disability. The following section sheds light on the United States' plight to properly educate its youth with disabilities. Relevant laws are discussed along with a detailing of the unique challenges and outcomes students with disabilities often face.

Educating Students with Disabilities

The United States has a well-chronicled history regarding education of students with disabilities. According to the Individuals with Disabilities Education Act (IDEA; 2004), the following terms are associated with students with disabilities: autism, deaf-blindness, deafness, emotional disturbance, intellectual disability, hearing impairment, multiple disabilities, orthopedic impairment, other health impairment, specific learning disability (e.g. dyslexia), speech or language impairment, traumatic brain injury, visual impairments, developmental delay, gifted and talented, and twice exceptional.

The Rehabilitation Act of 1973 arose out of a newfound desire to make American schools more inclusive, exacerbated by the tireless efforts that occurred during the Civil Rights Movement. The Act, essentially, forbids any entity receiving federal funding from discriminating based on an individual's ability status (Employer Assistance and Resource Network on Disability Inclusion, n.d.). The Act has five sections: 501, 503, 504, 505, and 508. Section 504 of the Act contains numerous policies for schools that receive federal funding. Section 504 introduced the concept of a "Free and Appropriate Public Education, or "FAPE" for short. Essentially, all students, regardless of ability status, are entitled to a free and appropriate public education (U.S. Department of Education, 2016b). "Free" is operationalized as the child's parents not having to pay the school, or any other entity, for their child with a disability to attend public school (U.S. Department of Education, 2010).

As a part of FAPE, students with disabilities are entitled to an "appropriate public education," meaning that they must receive an educational experience that provides the same quality of education for students with disabilities as their general education peers, along with other requirements (U.S. Department of Education, 2010). The U.S. Department of Education provided the following qualifiers to the term "appropriate," including (1) equitable educational

settings (i.e., students with disabilities learning in the same educational environment as nondisabled peers), (2) equitable educational rigor, (3) well-defined measures to assess and reevaluate identified students, and (4) clearly-stated due process information for parents and students.

This landmark legislation presages additional acts such as (1) The Education for All Handicapped Children Act, renamed the "Individuals with Disabilities Education Act" (IDEA) in 1997, (2) the Americans with Disabilities Act (ADA) in 1990, (3) No Child Left Behind Act (NCLB) in 2002, and (4) the Every Student Succeeds Act (ESSA) in 2015. The aforementioned legislations promoted increased accountability measures to ensure equitable educational experiences for all students, regardless of ability status.

Impact on School Counseling. The implementation of these acts has significantly altered the landscape of the school counseling profession. This section highlights key school counselor implications from both the Rehabilitation Act of 1973 and the Individuals with Disabilities Education Act. Section 504 of the Rehabilitation Act of 1973 (hereafter, "Section 504"). Both pieces of legislations were developed to guarantee that students with disabilities have access to the same opportunities as students without disabilities (United States Department of Education, 2018).

Students identified as having a disability, as defined by Section 504, are entitled to a 504 plan. Essentially, a 504 plan is a legally-binding document outlining the accommodations a student receives to ensure the student receives a free and appropriate public education (United States Department of Education, 2008). Example accommodations include (1) service dogs, (2) small group testing, and (3) extra time to complete assessments (Bottsford-Miller, Thurlow, Stout, & Quenemoen, 2006; Russo & Osborne, 2009). Of course, the accommodations vary

based on the child's specific needs. Although there is great variance in how school districts interpret Section 504 protocol, research indicates that school counselors are often legally responsible for ensuring implementation of each identified child's 504 plan (Madaus & Shaw, 2006, 2008).

Like the Rehabilitation Act of 1973, the passage of IDEA (formerly known as the Education for All Handicapped Children Act) in 1997 sought to further ensure students with disabilities received the free and appropriate public education (FAPE) they are entitled to, among other rights (Cortiella & Horowitz, 2014). Eligible students may receive an individualized education program (i.e., an "IEP"). Like a Section 504 plan, an IEP is a legally-binding document articulating the strategies the school will employ to certify that the eligible student receives access to FAPE (Christle & Yell, 2010); however, unlike a Section 504 plan, students found eligible for an IEP have (1) documentation of at least one of the 13 eligible disabilities covered by IDEA (2004) and (2) an educational need for which a IEP could help increase child access to FAPE (Russo, Osborne, Massucci, & Cattaro, 2009). Children found eligible for an IEP have an IEP team who develops the IEP and monitors students' progress.

School counselors may serve as a key member of the IEP team, helping make certain students have equitable access to educational opportunities (Milsom, Goodnough, & Akos, 2007). This aligns with ASCA's (2016a) stance regarding the role of school counselors in supporting students with disabilities. School counselors, unlike many other school-based personnel, have specialized coursework in group work, making them highly knowledgeable about group dynamics and processes. Coupled with school counselors' role as advocates, school counselors promote active participation, helping parents understand the red tape and jargon riddled throughout the IEP process so they can knowledgeably engage in discussions about their

child(ren). Outside of the IEP team arena, school counselors may be required to provide counseling to students.

While each aforementioned legislation poses numerous challenges, they also provide opportunities for school counselors to further support student growth. They can be used as vehicles to promote equitable access to educational opportunities, a cornerstone of school counselors' role (Dahir, 2004). When meeting with stakeholders, school counselors' mental health training allows them to stress how a child's mental health needs impact their academic performance. Additionally, the data-centered nature of contemporary special education legislation helps school counselors better promote their impact on students' academic achievement, personal/social development, and post-secondary outcomes (Studer, Oberman, & Womack, 2006).

Prevalence of Students with Disabilities

The creation of the aforesaid legislation encouraged greater access to public education in the United States. The U.S. Center for Educational Statistics (2018) collected data detailing the prevalence of students with disabilities ages 3-21 during the 2015-2016 school year. The data revealed that 34% of all students served under IDEA had a specific learning disability. Additionally:

- 20% of students had a speech or language impairment.
- 14% had an "other health impairment".
- 9% had autism.
- 6% had a developmental delay.
- 6% had an intellectual disability.
- 5% had emotional disturbances.

- 2% had multiple disabilities.
- 1% had an orthopedic impairment.

Collectively, students with disabilities comprise a substantial percentage of students in our schools. Overall, since the 2000-2001 school year through the 2015-2016 school year, the nationwide number of students receiving special education services increased from 6.3 million to 6.7 million (U.S. Center for Educational Statistics, 2018).

Challenges of Students with Disabilities

Students with disabilities encounter multiple obstacles in school. While many are disability-specific, research has indicated these challenges are universal. Children with disabilities are at greater risk of bullying victimization (U.S. Department of Health and Human Services, 2008). This situation may be exacerbated by relatively deficient social skills development, difficulty developing positive peer relationships, and a non-inclusive school community. Related investigations suggest that students with disabilities generally have lower self-concepts (Chapman, 1988; Panicker & Chelliah, 2016; Zeleke, 2004) and graduate at lower rates than their general education peers. For the 2015-2016 school year, roughly 84% of all students graduated within four years (National Center for Education Statistics, 2017); however, in the same school year, only 66% of students with disabilities graduated within the same window. Similarly, students have differentiated post-secondary outcomes than their general education peers. A ten-year-long study of children with disabilities ages 13-16 (with a sample that was nationally representative) yielded the following results:

- 55% of students enrolled in postsecondary education (*ever*) since exiting high school, compared to 62% for general education students;

- 39% of students enrolled in postsecondary education within the past two years, compared to 60% for general education students; and
- 21% of students were enrolled in postsecondary education when the interview occurred, compared to 41% for general education students (National Center for Special Education Research, 2011).

Students with Learning Disabilities

Within the "students with disabilities" subsection of students in U.S. public schools exists students with learning disabilities. As mentioned previously, students with learning disabilities comprise roughly 34% of all public school students identified as having a disability (U.S. Center for Educational Statistics, 2018), making them the most populous disability category as defined by IDEA (2004). IDEA (2004) defines a learning disability as

> A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia (§300.7(c)(10)(ii)).

According to the National Center for Learning Disabilities (2014), the most common learning disabilities are dyslexia, dyscalculia, and dysgraphia. The extent and manifestation of each learning disability is specific to each learner. Common signs of a possible learning disability include (1) challenges with writing, reading, and/or mathematics, (2) trouble remembering information, (3) problems maintaining focus and following instructions, and (4) challenges staying organized, although these signs do not

supersede formal diagnosis by a trained provider. These “warning signs” also resemble typical child developmental challenges and behaviors, complicating the diagnostic process.

Research has revealed several academic, behavioral, and social difficulties common to students with learning disabilities. According to the National Center for Learning Disabilities (n.d.), these students are 31% more likely to be bullied, compared to their peers without learning disabilities. The public nature of various educational accommodations may exacerbate this issue (Rose, Monda-Amaya, & Espelage, 2011). During the 2015-2016 school year, roughly 17% of all high school students with learning disabilities dropped out of high school (U.S. Department of Education, 2016a). Only “students with emotional disturbances” had a higher dropout percentage (34%). Students with learning disabilities may also experience difficulties fitting in to various social groups both in school and in the community (e.g., Boys Scouts, Girls Scouts), negatively impacting one’s self-esteem (Ginieri-Coccossis et al., 2013; Lambie & Milsom, 2010; Learning Disabilities Association of America, 2013). Students may struggle in core subjects such as reading and mathematics, particularly in subcategories such as reading comprehension and decoding word problems (Boardman et al., 2016; Marita & Hord, 2017). Furthermore, these students are suspended from school at disproportionate rates, when compared to their general education peers (Brobbey, 2018).

All these factors can prove deleterious to the post-secondary outcomes of students with learning disabilities. Adults with learning disabilities are unemployed at higher rates than their general education peers (McMahon et al., 2015). This is attributed to several reasons, such as (1) lack of postsecondary opportunities, and (2) not knowing what employment options are available (Folk, Yamamoto, & Stodden, 2012; Grigal, Hart, & Migliore, 2011). Additionally, while

students with learning disabilities attend college at nearly the same rate as their peers (67%), only 41% of students with learning disabilities complete their degree (Cortiella & Horowitz, 2014). These statistics are not meant to globally define the experiences of all students with learning disabilities. Rather, it offers research-based findings related to outcomes of these students. It is vital to note that every child is unique; thus, the characteristics do not manifest in all students with learning disabilities. The following section highlights the ASCA National Model.

ASCA National Model

The American School Counselor Association (ASCA) is the national association for the school counseling profession. Four independent associations convened a joint convention in Los Angeles, CA in 1952: The National Vocational Guidance Association (NVGA), the National Association of Guidance and Counselor Trainers (NAGCT), the Student Personnel Association for Teacher Education (SPATE), and the American College Personnel Association, in hopes of providing a larger professional voice. They established the American Personnel and Guidance Association (APGA). The initial organization that later became ASCA was founded in 1952. The organization now serves to promote the school counseling professional through enhancement of school counselors' expertise, advocacy for critical school counselor and student needs, school counselor empowerment and attaining the highest levels of professional, legal, and ethical standards (ASCA, n.d.-b). The concept of a "national model" was introduced by ASCA in 2001 (Hatch & Chen-Hayes, 2008). Based on the seminal work largely by Norman Gysbers (1990) in Missouri and Robert Myrick (1993) in Florida, the national model, developed in 2003 and later revised in 2005, incorporated new tenets, such as data-informed counseling and aligning one's school counseling program with the ideologies of the school, school division, and state in which the school is situated. Additionally, the National Model was viewed as a mechanism to advocate

for increased school counselor allocations in schools across the nation. Recognizing a dearth of empirical data supporting school counselor effectiveness in improving student outcomes, the ASCA National Model charged school counselors to provide objective data supporting the effectiveness of their school counseling program (Hatch & Chen-Hayes, 2008). This data-informed mindset reflects a significant paradigm shift in the school counseling profession, as school counselors were asked to provide tangible results regarding the effectiveness of their work.

The ASCA National Model has underwent additional changes since the earliest iteration. The latest ASCA National Model (2019c) reflects increased intentionality regarding the school counseling profession. Graduate students in school counselor preparation programs may be introduced to the model, and its utility, during their coursework. Four guiding components undergird the 2019 version of the national model: define, manage, deliver, and assess. The use of verbs helps better convey what school counselors do (ASCA, 2019c). Collaboration, systemic change, leadership, and advocacy are themes that were explicitly included in the previous iteration of the ASCA National Model (2012); however, they are not explicitly included in the executive summary of the newest model as they are "woven throughout the ASCA National Model to show they are integral components of a comprehensive school counseling program" (ASCA, 2019c, p. 116). Given the importance of the four themes to the role of the school counselor, they will be unpacked later in this section.

Define and Manage. The "define" component of the ASCA National Model is designed to help school counselors clarify goals and objectives in promoting positive student outcomes while ensuring that school counselors uphold ethical standards and competencies (ASCA, 2019c). School counselors use the ASCA Mindsets and Behaviors for Student Success (2014a) to

guide the development of meaningful core curriculum and small group lessons. While the aforementioned document speaks to student standards, both the (1) ASCA Ethical Standards for School Counselors (2016c) and the ASCA School Counselor Professional Standards and Competencies (2019a) are used in this section, serving as a roadmap to ethical decision making and the development of a comprehensive school counseling program. School counselors are invited to examine their beliefs and seek out professional development opportunities when needed. The "manage" component of the ASCA National Model provides tangible resources to help school counselors develop and sustain a comprehensive school counseling program (ASCA, 2019c). School counselors develop a mission and vision statement that aligns with the school's goals and the school counselor's beliefs rooted in education, mental health, child development, and other domains. The development of a mission and vision statement are key programmatic milestones accomplished in this section. Other benchmarks completed include (1) developing an advisory council, (2) completing an annual administrative conference with an administrator, and (3) ensuring that 80% of their time is spent providing direct services (i.e., services, such as individual counseling, that involve the school counselor working directly with students).

Deliver. Next, the "deliver" component of the ASCA National Model helps school counselors determine *how* they will accomplish these aspirations (ASCA, 2019c). School counselors are credentialed to provide several services, such as (1) individual counseling, (2) small-group counseling, (3) classroom instruction, (4) appraisal, (5) advisement, and (6) collaboration. Recently, school counselors have been integrated into systemic intervention frameworks called "Positive Behavioral Interventions and Supports" (PBIS) and "Response to Intervention" (RtI) (Goodman-Scott et al., 2019; Sink & Ockermann, 2016).

In fact, ASCA and several sources asserted that (1) a comprehensive school counseling program and (2) multitiered systems of support (MTSS) pair well together (ASCA, 2016b; Donohue, Goodman-Scott, & Betters-Bubon, 2018; Goodman-Scott, Betters-Bubon, & Donohue, 2019; Ryan, Kaffenberger, & Carroll, 2011; Ziomek-Daigle, Goodman-Scott, Cavin, & Donohue, 2016). PBIS, corresponding to RtI, is a schoolwide intervention process with many moving parts, generally taking a few years to fully implement. PBIS and RtI typically consist of three tiers, all of which involve the school counselor (Goodman-Scott & Grothaus, 2018; Goodman-Scott et al., 2019). Within PBIS and RtI, school counselors deliver several services, such as (1) small group counseling, (2) classroom instruction for all students, and (3) communicating with parents and outside agencies regarding concerns that fall outside of the school's scope. From a macrolevel, PBIS was developed to promote desired behavior, work habits, academic excellence, and positive peer and adult interactions (OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports [OSEP Center on PBIS], 2015).

Akin to PBIS, school counselors can address the "quality core instruction" component of RtI, offering core curriculum lessons on salient topics. They collaborate with relevant school staff members to implement empirically-sound interventions. School counselors are data-savvy as well, allowing them to support school staff in the interpretation of student progress data (e.g., reading scores, disciplinary trends). Students who do not respond to universal interventions could receive more individualized support (e.g., individual counseling, small group counseling) on topics that often fall within the school counselor's scope, such as social skill development, study strategies, and mindfulness. In summary, school counselors have specialized expertise that can augment the effectiveness of PBIS and RtI (Ryan et al., 2011). In alignment with the ASCA

National Model (2012), school counselors develop proactive interventions that bolster student success. Overall, PBIS and RtI are effective in improving students' academic performance, behavior, and comfort being at school (Benner, Nelson, Sanders, & Ralston, 2012; Horner et al., 2009; Marin & Filce, 2013; McIntosh, Sadler, & Brown, 2012).

Assess. In line with Dahir and Stone's (2009) and Sink's (2009) call to be accountability leaders, the assess section of the ASCA National Model is designed to help school counselors measure, formatively and summative, the effectiveness of their school counseling program (ASCA, 2019c). Furthermore, it aims to determine student change over time. There are many tools school counselors can use to track effectiveness. School data profiles help school counselors examine large and small trends in student performance. Other salient reports, such as (1) closing the gap reports, (2) small-group results reports, and (3) curriculum results reports, provide valuable information to inform the degree to which the school counselor is making an impact. ASCA provides a litany of resources to help guide accountability measures.

Systemic Change, Leadership, Collaboration, and Advocacy. As mentioned previously, while not explicitly noted in this iteration of the ASCA National Model (2019c), systemic change, leadership, collaboration, and advocacy are key cogs in the development of a comprehensive school counseling program. While not as tangible as the aforementioned components, the spirit of these four components pervades throughout the entire counseling program. Given the large overlap between the four components, they have been grouped into the same section. Systemic change refers to collaborating with key stakeholders to identify and eradicate barriers that stymie student growth (ASCA, 2012). The model charges school counselors to recognize and address inequities and injustices that are often riddled throughout schools. Similarly, the Model charges school counselors to embrace their role as leaders within

the school community (ASCA, 2002). Effective leadership is key to creating systemic change and requires the school counselor to commit to creating a comprehensive school counseling program (Miller Kneale, Young, & Dollarhide, 2018; Shields, Dollarhide, & Young, 2018; Shillingford & Lambie, 2010; Young & Dollarhide, 2018). As school counselors maneuver through the process of aligning their school counseling program with the ASCA National Model (2019c), school counselors provide (1) structural leadership, human resource leadership, political leadership, and symbolic leadership (ASCA, 2012). Collaboration involves working with key stakeholders to address student and school needs. This may occur informally—such as impromptu conversations with parents and staff—or more formally—such as through preplanned meetings with specific purposes. Lastly, advocacy involves shedding light on salient student needs and working to ensure that the needs are being addressed. The following section discusses the school counseling profession's relationship with special education practice.

The School Counselor and Students with Disabilities

The American School Counselor Association (ASCA, n.d.-a) posited that school counselors are school-based professionals committed to addressing the academic, personal/social, and college and career needs of *all students* through the development of a CSCP. ASCA clearly affirms that school counselors must be committed to all students, regardless of ability status. First, school counselors work within their scope of practice and knowledge (ASCA, 2016); this prescription extends to students with disabilities. In their graduate programs, these professionals learn best practice and current information regarding the needs of special education population and how schools can better support these students with special needs. For instance, whenever deemed necessary by the individualized education plan (IEP) team, school counselors provide short-term brief individual and group counseling supports. They also work to galvanize parental engagement in the IEP process, often serve on the actual IEP team, advocate

for student needs, and support the development of transition plans for students when they leave school. ASCA also has a strong stance regarding inappropriate duties as it relates to students with disabilities. School counselors should not be the sole decision-maker regarding placement in courses. They also should not assume a supervisory or administrative role in the coordination of IEPs. In alignment with ASCA's school counseling philosophy, long-term therapy should not be requested from school counselors.

School Counselor Self-Efficacy

Research exists purporting practicing school counselors' self-efficacy to provide necessary supports to students with disabilities. Newly-minted and seasoned school counselors express having varying degrees of anxiety regarding adequately supporting students with disabilities (Kolodinsky et al., 2009; Milsom, 2002; Nichter & Edmonson, 2005; Romano et al., 2009). Despite these feelings, school counselors are still responsible for seeking opportunities for professional development centered on the unique needs and rights of students with disabilities (Skovholt & McCarthy, 1988; Studer & Quigney, 2004). School counselors receive varying levels of pre-service training in supporting students with disabilities, often steepening the learning curve new school counselors face (Nava & Gragg, 2015). This lack of knowledge often hinders school counselors' ability to adequately support students with disabilities and their parents, both of whom are integral components of the IEP team (Kushner, Maldonado, Pack, & Hooper, 2011; Owens et al., 2011). The number of students with document disabilities in United States schools is growing (McCarthy, Van Horn Kerne, Calfa, Lambert, & Guzmán, 2010), increasing school counselors' perceived challenges in properly supporting this growing demographic. The following section discusses information pertaining to school counselor preparation.

Pre-Service Preparation

Research suggests that school counselors may not receive adequate pre-service training in special education (Geddes Hall, 2015; Romano et al., 2009; Studer & Quigney, 2004). Like most professions, school counselors underwent a prescribed training modality that prepared them to become school counselors. ASCA reports that school counselors must (1) have at least a master's degree with a concentration in school counseling, (2) fulfill state and local continuing education requirements, and (3) follow all relevant ASCA and American Counselor Association (ACA) codes (ASCA, n.d.-a). All states, school districts, and employers do not subscribe to this notion, as individuals in similar disciplines (e.g. social work, clinical psychology) have been hired in school counselor roles.

School counselors often feel underprepared to support students with disabilities (Coskun, 2010; Deck, Scarborough, & Sferrazza, 1999; Kolodinsky et al., 2009). Lack of coursework or field experiences in special education can prove deleterious to school counselors' scope of expertise (Milsom, 2002; Nava & Gragg, 2015). Research indicates a positive correlation between a school counselors' self-efficacy and their belief in their ability to effectively counsel and support students with disabilities (Aksoy & Dken, 2009). Inadequate preparation often requires school counselors to seek professional development opportunities to expand their narrow knowledge base in this area, learning salient laws, protocols, and best practices to properly support students with disabilities (Deck et al., 1999).

The Council for Accreditation of Counseling & Related Educational Programs (CACREP) is commonly lauded as a major accrediting body in the counseling profession in the United States. Founded in 1981, CACREP offers accreditation to counselor preparation programs who meet predetermined curricular and programmatic requirements (Urofsky, 2013). Until July 1, 2020, school counselor preparation programs must, minimally, require completion

of 48 semester hours (CACREP, 2015). While CACREP does not dictate which courses school counseling programs must offer, the Council provides significant guidance regarding curricular expectations. CACREP has developed eight "common core areas." Essentially, these areas reflect competencies that CACREP has identified as being integral to the development of well-rounded clinicians. The eight common core areas are: (1) professional counseling orientation and ethical practice, (2) social and cultural diversity, (3) human growth and development, (4) career development, (5) counseling and helping relationships, (6) group counseling and group work, (7) assessment and testing, and (8) research and program evaluation. CACREP's (2015) 2016 standards contain many sections that dovetail neatly with school counselors' work with students with learning disabilities; such as:

- Strategies for advocating for diverse clients' career and educational development and employment opportunities in a global economy;
- A general framework for understanding differing abilities and strategies for differentiated interventions; and,
- School counselor roles in school leadership and multidisciplinary teams (CACREP, 2015).

Similarly, ASCA has released literature supporting school counselors' role in supporting students with disabilities, including:

- Providing assistance with developing academic, transition and postsecondary plans for students with IEP's and 504 plans as appropriate;
- Consulting and collaborating with staff and families to understand the special needs of a student and understanding the adaptations and modifications needed to assist the student; and,

- Providing school counseling curriculum lessons, individual and/or group counseling to students with special needs within the scope of the comprehensive school counseling program (2016a).

Summary

The special education landscape has been transformed, over the past 50 years. Schools now face increased state and federal scrutiny to ensure that students with disabilities have access to FAPE (U.S. Department of Education, 2016b). Students with learning disabilities comprise the largest subsection of students with disabilities (i.e., roughly 34%); many encounter school-based risk factors (e.g., bullying, isolation) that negatively impact both K-12 and post-secondary outcomes (Ginieri-Coccossis et al., 2013; Marita & Hord, 2017; McMahon, Cihak, & Wright, 2015; National Center for Education Statistics, 2018). Despite ASCA's (2016a) and CACREP's (2015) proclamations regarding how school counselors can positively support students with disabilities (e.g., advocacy, data-informed practices), prior research indicates varying degrees of school counselor self-efficacy in supporting the diverse needs of students with disabilities. Research reveals a relationship between self-efficacy and both (1) school counselor and (2) student outcomes (Mullen & Lambie, 2016). It is important to note, however, that the researcher does not intend to make nor imply causal attributions. The preceding chapters supports the necessity for an instrument that assesses school counselors' self-efficacy to counsel and support students identified as having learning disabilities, given both (1) students with learning disabilities' differentiated outcomes and (2) literature detailing the role of the contemporary school counselor. The next section outlines the method deployed in this research study.

CHAPTER THREE

METHODOLOGY

This section begins with a discussion of the study's research aim, questions, and hypotheses. Next, the research design is overviewed, followed by a description of study participants and sampling methods. Thereafter, the study's instrumentation are summarized. Following, the research procedures are detailed, including a description of confidentiality measures. Lastly, data analysis techniques will be discussed.

Research Aim, Questions, and Hypotheses

This study focused on developing a valid and reliable instrument called the "Students with Learning Disabilities School Counselor Self-Efficacy Scale" (SLDSCSES). "School counselor self-efficacy" is defined as a school counselor's perceived belief in their ability to effectively counsel and support students with disabilities. Exploratory factor analysis (EFA) was used to (1) determine the SLDSCSES' underlying dimensionality, (2) understand which variables comprise each factor, (3) identify inter-item and total-scale (dimension) correlations, (4) determine the extent to which individual variables and factors correlate, and (5) determine the amount of common variance accounted for between the identified factors (Dimitrov, 2012). EFA was suitable in this study as the researcher had minimal expectations regarding the emerging latent factors (Fabrigar & Wegener, 2012).

To reiterate, the research questions considered in this study asked:

- Does the SLDSCSES possess internal consistency reliability?
- Does the SLDSCSES demonstrate factorial validity?
- Using demographic variables as independent variables, do significant group differences exist on subscale scores?

Two major null hypotheses were as follows:

- The majority of the items comprising the intercorrelation matrix will be nonsignificant.
- No statistically significant group differences exist on subscale scores.

Respectively, some of the expectations for the EFA regarding item statistics and subscales were:

- Post-EFA rotation, all of the derived items comprising or marking each subscale will have a factor loading of .35 or higher.
- The derived subscales will have an alpha coefficient of .70 or higher (per subscale).

The following section outlines the proposed research design, participants, sampling method, instrumentation, procedures, data analysis techniques, and limitations.

Research Design

The research aimed to determine the psychometric properties of the Students with Learning Disabilities School Counselor Self-Efficacy Scale (SLDSCSES). Assuming the multidimensional nature of the measure, potential demographic group differences on the outcome variables (subscale/factor scores) were assessed. This study employed an exploratory factor analysis (EFA) statistical procedure as the researcher intended to extract latent factors that existed within the scale. Qualitative analyses were also used in this study, such as reviewing the narrative feedback from content experts and from the pilot study using a developmental sample (see Procedures for details).

Specifically, expert review is a critical element in supporting construct validity (Dimitrov, 2012). Early in the research process, feedback was elicited from expert reviewers, operationalized as current tenure-track professors in school counseling with relevant special education professional experience (i.e., post-secondary teaching, research, and/or practice). This

research design does not manipulate variables, so there were no true independent and dependent variables. Following expert review, a pilot study was conducted to (1) ensure readability, clarity, and formatting, (2) determine if decent psychometric properties exist, and (3) check for errors (Viechtbauer et al., 2015). Research supports the recruitment of 15-30 participants for a preliminary pilot study (Crocker & Algina, 2008); thus, the pilot study recruited 20 practicing public school counselors to complete the scale and offer preliminary feedback before widespread dissemination.

Participants

Sample size significantly impacts the quality of the EFA solutions (Dimitrov, 2012). While opinions vary, research supports a ratio of "ten people per question" (i.e., 10:1; Howard, 2016; Thompson, 2004). The researcher aimed to include 20 questions in the final version of the scale; thus, the researcher recruited well over 300 participants. Participants were recruited to complete the SLDSCSES. Participants consisted of school counselors currently practicing in K-12 public school settings. See chapter 4 for a summary of participant characteristics.

Sampling

The researcher employed both snowball sampling and convenience sampling in this study. Snowball sampling recruits participants through word of mouth (Creswell, 2012). In other words, an individual who completed the study shares the study information with another eligible individual, with the researcher hoping the prospective participant will complete the study. This is an excellent way to recruit a large number of research participants. The researcher also contacted graduate program directors of school counseling programs, requesting that they forward the recruitment information to school counselors within their network (e.g., alumni currently working as school counselors in public settings, internship supervisors working in public school settings). The researcher used social media, professional organizations, and school counseling-

related listservs for recruitment purposes, as well. As further summarized in chapter 5 under research limitations, snowball sampling and convenience sampling run the risk of creating results that are not generalizable (Creswell, 2012). The researcher gave careful attention toward developing a sample that is representative of school counselors in the United States.

Instrumentation

The researcher used two instruments in this study (see Appendix A). First, the researcher administered the Students with Learning Disabilities School Counselor Self-Efficacy Scale (SLDSCSES) to participants. The instrument, the SLDSCSES, is an ASCA-informed tool designed to measure school counselors' belief in their ability to counsel and support students with learning disabilities. In developing the instrument, the researcher examined the literature for similar measures in the school counseling and counseling realms. Regrettably, none could be located. The researcher then consulted the literature for a similar scale that had been used and validated in K-12 settings. The identified scale, the Teaching Individuals with Disabilities Efficacy Scale (Dawson & Scott, 2013), was developed to ascertain teacher's self-efficacy to teach students with disabilities. These researchers surveyed 288 teachers and 143 preservice teachers, employing primary components analysis method to validate the scale and identify scale constructs. The scale has 5 subscales: instruction, professionalism, teacher support, classroom management, and related duties, and contains Likert scale statements such as:

- I can adapt the curriculum to help meet the needs of a student with disabilities in my classroom.
- I can be an effective team member and work collaboratively with other teachers, paraprofessionals, and administrators to help my students with disabilities reach their goals.

- I can manage a classroom that includes students with disabilities (Dawson & Scott, 2013).

In developing the scale, Dawson and Scott (2013) (1) consulted relevant literature to create an initial item bank, (2) received expert review from educational psychology doctoral students and practicing teachers, (3) pilot tested the revised scale on preservice teachers, and (4) final tested on both preservice and practicing teachers. The Teaching Students with Disabilities Efficacy Scale has strong psychometric properties. The scale has an overall Cronbach alpha of .913, indicating that the items strongly relate to each other and respondents perceive the item content in relatively similar ways. The subscale Cronbach alphas for instruction, professionalism, teacher support, classroom management, and related duties, were .880, .843, .846, .882, and .779, respectively. Furthermore, all the loadings marking factors were greater than .50.

Given the absence of a similar scale in the school counseling profession, the researcher for this study sought to adapt the aforementioned TSDES for school counselors. The creators of the TSDES granted the researcher permission to adapt their scale for school counseling research purposes. The scale's items parallel aspects of the ASCA National Model (2019c) and, thus, current trends in the school counseling profession. As mentioned previously, the TSDES contains 5 subscales: instruction, professionalism, teacher support, classroom management, and related duties. When examining the items and latent variables, the researcher compared them to elements of the ASCA national model (ASCA, 2019c). The questions, while developed for general education teachers, appeared to closely align with school counseling tenets such as: direct services, collaboration, systemic change, consultation, responsive services, and indirect services. These are cornerstones of the National Model, making the TSDES an excellent

candidate to serve as the foundation for the Students with Learning Disabilities School Counselor Self-Efficacy Scale.

Next, the researcher developed a demographic questionnaire (see Appendix A) for the purposes of obtaining background information on the respondents. Sample background variables were age, gender, ethnicity, caseload, urbanicity, years serving as a school counselor, grade level served, master's program accreditation status (i.e., CACREP vs. non-CACREP at the time of graduation), and years of prior teaching experience. The following section overviews the research procedures.

Procedures

The researcher first obtained approval from the College of Education's Human Subjects Review Committee approval at Old Dominion University. Next, the researcher contacted the developers of the TSDES to obtain permission to use the measures in the study. Once granted the appropriate permissions, Qualtrics, a software that creates surveys and collects survey data, was used to create a survey requesting both (1) participant demographic information and (2) participants' responses to items on the SLDSCSES. Once finalized, the researcher distributed study participation requests via the sampling methods described earlier. Informed consent was obtained electronically; the consent form was the first document prospective participants saw upon opening the survey. Participants then read the form and types their name and date in a corresponding field, confirming consent to participate. The researcher protected the survey through Old Dominion University's two-factor authorization secure log in system. Access was restricted to only the researcher. Identifying information was coded and then removed, to protect confidentiality.

Data Analysis Techniques

Following the collection of quantitative data from *Qualtrics*, the data set was exported to SPSS (version 25), a statistical analysis software. Missing Likert scale data remained blank, as not to assign a value. Extreme outliers were removed from the data set. Descriptive statistics were computed to detect any errors and the parametric nature of the criterion variables. For example, means, standard deviations, kurtosis, and skew were computed. Thereafter, an interitem correlation matrix was generated and statistical significance was be evaluated using the *p*-value of $< .05$.

Once the correlation matrix was generated showing low-moderate ($r = .25$) to strong ($r = .80$) inter-item correlations, the researcher employed EFA to ascertain the degree of shared variance between the latent variable groupings (Mvududu & Sink, 2013). EFA is helpful in determining factor structure, exploring internal reliability, and identifying important factors to help with classification. The researcher used SPSS to create a correlation matrix based on participant responses to the scale items. Given the possibility of error in ascertaining factorability, the research deployed Bartlett's test of sphericity to determine the factorability of the data set. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was also be employed to confirm an appropriate sample size. To further aid in ensuring factorability, the researcher examined the determinant as well, expecting to see a non-zero coefficient.

Next, the researcher commenced the factor extraction component of EFA. Factor extraction involves separating shared variance from unique variance (i.e., unique and specific variance), ensuring that the isolated common variance is not shared with other variables (Mvududu & Sink, 2013). It also helps determine how many factors should be retained. Commonalities were calculated to determine the amount of shared variance for each variable.

Eigenvalues were also calculated to determine the total amount of variance explained by each factor.

In deciding how many factors to retain and eventually rotate, the researcher completed several steps. First, the Kaiser criterion was utilized, effectively removing all factors whose eigenvalues are less than 1. To allow further accuracy, the researcher analyzed the "total variance explained" chart to identify meaningful variance. Any remaining factors with an eigenvalue less than 5% was removed. Next, the researcher used the scree plot to further increase the likelihood for accuracy in determining the number of factors.

The three aforementioned methods (i.e., Kaiser criterion, total variance explained, and scree plot) have been critiqued as being subjective and, in some ways, arbitrary factor extraction methods (Hayton, Allen, & Scarpello, 2004; Kahn, 2006). To address these concerns the researcher employed parallel analysis (Horn, 1965). It is considered superior to the aforementioned methods (Zwick & Velicer, 1986). The method creates eigenvalues from a randomized data set with the same sample size and questions as the true data set. Eigenvalues from the randomized data set were compared with the eigenvalues from the true data set to determine how many factors to retain. The true eigenvalues that are higher than the randomized eigenvalues were retained.

The next step involved factor rotation. The researcher utilized the oblique (direct oblimin, delta = 0) method of factor rotation. It is prudent to use the oblique method in counseling-related studies, given the increased predisposition for intercorrelations between variables or factors (Mvududu & Sink, 2013). After reviewing the SPSS data output table, each factor was labeled based on its grouping of factor loadings and the item content. Lastly, the researcher conducted a

reliability analysis on both (1) the overall measure and (2) each derived dimension, possibly adjusting the number of items to further increase reliability.

Finally, meaningful group comparisons based on aggregated demographic data were computed on factor scores using MANOVA. Significant findings include relevant effect sizes.

Summary

In this psychometric study, the researcher administered the SLDSCSES, a measure adapted from the Teaching Students with Disabilities Efficacy Scale (Dawson & Scott, 2013), to practicing school counselors. The American School Counselor Association (2012) asserted that school counselors support all students though the development and implementation of a comprehensive school counseling program. The implications, derived from both the exploratory factor analysis and the group comparison analyses, should provide clarity regarding school counselors' belief in their abilities to effectively support students with learning disabilities in K-12 settings (Rock & Leff, 2007; Shifrer, Callahan, & Muller, 2013). In following chapter, the findings of the study are reported.

CHAPTER FOUR

RESULTS

Chapter 4 summarizes the results of the present study. To start, a brief review of the research questions and hypotheses are provided, followed by participant demographic information and an overview of the data set. Next the normality of scale items is reviewed. The researcher then summarizes the results of the item and exploratory factor (EFA) analyses, including a description of how the latent factors were named. Lastly, the statistical findings for the reliability and multivariate analyses are presented.

Restatement of Research Aim, Questions, and Null Hypotheses

The purpose of this study was to address a sizable gap in research literature through the development and validation of the Students with Learning Disabilities School Counselor Self-Efficacy Scale (SLDSCSES). The instrument estimates school counselors' self-efficacy to counsel and support students with learning disabilities. The section below reiterates the study's research questions and associated null hypotheses.

Research Question 1: Does the SLDSCSES possess internal consistency reliability?

Hypothesis 1a: The majority of the items comprising the intercorrelation matrix will be nonsignificant, ranging in magnitude from low-moderate to strong.

Hypothesis 1b: The overall scale and the derived subscales will generate an adequate alpha coefficient (.70 +).

Research Question 2: Does the SLDSCSES demonstrate factorial validity?

Hypothesis 2: Post-EFA rotation, all of the derived items comprising or marking each subscale will have at least a low-moderate factor loading (.35+).

Research Question 3: Using demographic variables as independent variables, do significant group differences exist on subscale scores?

Hypothesis 3a: Statistically nonsignificant main effects across pertinent demographic variables (i.e., school counseling experience, caseload, prior teaching experience, prior special education teaching experience, and building level) will be found on subscale scores.

Hypothesis 3b: Statistically nonsignificant interaction effects across pertinent demographic variables (i.e., school counseling experience, caseload, prior teaching experience, prior special education teaching experience, and building level) will be found on subscale scores.

Dataset and Descriptive Statistics

Data were collected from 320 professional school counselors working in public school settings throughout the United States. Their ages ranged from 22 to 66 (M = 41, SD = 10.18). Descriptive statistics were also calculated for participants' age, gender, race/ethnicity, accredited graduate school education status (i.e., whether their program was CACREP accredited or not), years of school counselor experience, school counselor to student caseload, previous teaching experience, previous special education experience, school grade level, and number of schools worked in (see Table 1).

Specifically, for Gender, 6.9% (n = 22) were male and 93.1% (n = 298) female. For age, 24.7% (n = 79) of the participants indicated that they were between 22-32. Other ages were reported as follows: 23.1% (n = 74) 33-38, 27.2% (n = 87) 39-47%, and 25% (n = 80) 48+. For race/ethnicity, 73.1% (n = 234) of the participants indicated that they were Caucasian or white. Other ethnicities were reported as follows: 13.4% (n = 43) African American, 3.8% (n = 12)

Latinx, and 3.8% two or more races (*n* = 12). Moreover, 2.5% (*n* = 8) self-identified as a race other than the three provided above, and 3.4% (*n* =11) did not respond to the item. For CACREP status, 76.3% (*n* = 244) attended a CACREP accredited master's program in school counseling. For the demographic variable "experience," the school counselors who completed the survey had on average nine years of professional experience (*SD* = 7.65). Moreover, 25.9% (*n* = 83) had 1-3 years of experience, 22.8% (*n* = 73) had 4-6 years, 22.8% (*n* = 73) had 7-12 years, and 28.4% (*n* = 91) possessed at least 13 years of experience. School counselor caseload averaged 391 students per school counselor (*SD* = 195.74). Moreover, 32.3% (*n* = 103) registered 1-300 students on their caseload, 33.4% (*n* = 107) had 301-425 students, and 34.4% (*n* = 110) had at least 426 students on their caseload. For urbanicity, the following distribution of school settings were reported: 39.1% (*n* = 125) urban, 33.8% (*n* = 108) rural, 21.3% (*n* = 68), suburban, 4.7% (*n* =15), mixed geographical setting, .6% (*n* = 2) provided an "other" response, and .6% (*n* = 2) left this question unanswered. For teaching experience, 41% (*n* = 131) had instructional experience before becoming a school counselor. For special education experience, 18.1% (*n* = 58) of the participants reported having some special education teaching background. The distribution of school grade levels were: 34.7% (*n* = 111) of participants worked at the elementary level, 23.4% (*n* =75) of participants indicated that they worked at the middle level, and 31.6% (*n* = 101) worked at the high school level. It is important to note that 10.3% (*n* = 33) of the respondents counseled in a setting other than the aforementioned levels. For most school counselors (88.1%, *n* = 282), they served one building, while a minority (9.4%, *n* = 30) worked in two schools, more than two buildings (2.2%, *n* = 7), or did not work in a brick and mortar school setting (3%, *n* = 1).

Table 1

Frequency Distributions for Demographic Variables

Variable	*n*	%
Gender		
Male	22	6.9
Female	298	93.1
Ethnicity/Race		
Caucasian	234	73.1
Black	43	13.4
Latinx	12	3.8
Two or more races	12	3.8
Other	8	2.5
Did not respond	11	3.4
Age		
22-32	79	24.7
33-38	74	23.1
39-47	87	27.2
48+	80	25.0
CACREP Status		
Yes	244	76.3
No	43	13.4
Unsure	9	2.8
Did not respond	4	1.3

Table 1 Continued

School Counseling Experience (Years)		
1-3	83	25.9
4-6	73	22.8
7-12	73	22.8
13+	91	28.4
School Counselor Caseloads		
1-300	103	32.2
301-425	107	33.4
426+	110	34.4
Prior Teaching Experience		
Yes	131	40.9
No	189	59.1
Prior Special Education Experience		
Yes	58	18.1
No	262	81.9
Building Level		
Elementary	111	34.7
Middle	75	23.4
High	101	31.6
Other	33	10.3
Urbanicity		
Urban	68	21.3
Suburban	125	39.1
Rural	108	33.8
Mixed	15	4.7
Other	2	.6

Did not respond	2	.6

Data Screening and Cleaning

The researcher examined the data for any missing, incomplete, or miscategorized (e.g., changing a variable from a scale measure to a nominal measure). Any alphanumerical participant response was recoded into a numerical response in SPSS. A visual and numerical scan of the results indicated that less than 5% of participants' responses were missing. Therefore, missing values were replaced with the item mean (Field, 2013). To help facilitate the MANOVA, categorical data were stratified as appropriate (e.g., participant age was disaggregated into four age brackets). Q-Q plots, P-P plots, and box plots were generated to assess the data set and individual variables for normality.

Next, the researcher reviewed the descriptive statistics to determine if the items displayed extreme kurtosis and skewness (see Table 2 for descriptive statistics). Overall, the results of these statistical procedures indicated moderate levels of nonnormality in the item distributions. Specifically, most items contained both kurtosis and skewness indices that were greater than an absolute value of 1, suggesting that the item distributions were less than normal. Skew indices ranged from -.292 to - 1.839, while the kurtosis estimates ranged from -1.578 to 3.451. One item (i.e., Item 9 "I can consult with an intervention specialist in my school when I need help.") had an extremely high kurtosis (3.451) and skewness (-1.839); therefore, this item was removed from the data set. The researcher utilized the Mahalanobis distance SPSS tool to assess for multivariate normality. This tool identified 35 cases that were deemed multivariate outliers. Therefore, these cases were deleted.

Table 2

Item Descriptive Statistics (N = 320)

Items	*M*	*SD*	Skew	Kurtosis	Score Range Minimum	Score Range Maximum
Q1 I can adjust classroom lessons to help meet the needs of students with learning disabilities.	4.10	.746	-.898	1.201	2	5
Q2 I can adapt individual counseling sessions to help meet the needs of students with learning disabilities.	4.47	.612	-1.104	2.153	2	5
Q3 I can adapt small group counseling sessions to help meet the needs of students with learning disabilities.	4.28	.658	-.832	1.472	2	5
Q4 I can adjust classroom lessons to meet the needs of high-achieving students and low-achieving students simultaneously	3.85	.896	-.707	-.099	2	5
Q5 I can adjust small group counseling sessions to meet the needs of high-achieving students and low-achieving students simultaneously.	3.98	.809	-.793	.519	2	5
Q6 I can break down a skill into its component parts to facilitate learning for students with learning disabilities.	4.10	.763	-.731	.515	2	5
Q7 I can assist students with learning disabilities in setting personal long-term goals.	4.29	.730	-.998	1.153	2	5
Q8 I can assist students with learning disabilities in setting personal short-term goals.	4.40	.630	-.930	1.565	2	5
Q9 I can consult with an intervention specialist or other specialist when I need help.	4.60	.674	-1.839	3.451	2	5
Q10 I can be an effective team member and work collaboratively with other teachers, paraprofessionals, and administrators to help students with learning disabilities reach their goals.	4.63	.508	-.848	-.629	3	5
Q11 I can collaborate with families to understand the special needs of students with learning disabilities.	4.47	.643	-1.167	1.788	2	5

Table 2 Continued

Q12 I can advocate for the needs of students with learning disabilities during IEP team meetings.	4.40	.753	-1.208	1.146	2	5
Q13 I can advocate for changes to schoolwide policies and protocols to better serve students with learning disabilities.	4.06	.876	-.713	-.021	1	5
Q14 I can encourage students in my school(s) to become allies for students with learning disabilities.	4.34	.657	-.686	.321	2	5
Q15 I can encourage teachers in my school(s) to become allies for students with learning disabilities.	4.35	.641	-.622	.099	2	5
Q16 I can help create a school environment that is open and welcoming for students with learning disabilities.	4.54	.512	-.292	-1.578	3	5
Q17 I can create an environment that is open and welcoming for students with disabilities in my office.	4.78	.431	-1.579	1.154	3	5
Q18 I can provide professional development to stakeholders about ways to best support the social-emotional wellness of students with learning disabilities.	3.89	.948	-.609	-.283	1	5
Q19 I can provide assistance with developing transition/postsecondary plans for students with IEP's as appropriate.	3.79	1.018	-.619	-.335	1	5
Q20 I can help students with learning disabilities make informed decisions regarding postsecondary plans.	3.90	.993	-.783	.113	1	5

Note. SE kurtosis = .272; SE skewness = .136; with the case deletions, there were no missing data.

Inter-Item Correlation Matrix and Initial Reliability Analysis

Following data screening and cleaning, the researcher assessed the correlation matrix for item factorability. Ideally, coefficients should be higher than .21 and minimally correlate (r = .30) with at least half of the items (Field, 2013; Mvududu & Sink, 2013). A visual inspection of the matrix concluded that all 19 items minimally correlated with at least half of the items,

suggesting a degree of favorability of the interitem correlation matrix. A preliminary reliability analysis for the 19 items generated a Cronbach's alpha of .901. Removing an item would not improve the alpha coefficient. Appendix B displays the inter-item correlation matrix.

Additional assumption checking. The results of Bartlett's Test of Sphericity, $\chi^2(78) = 2074.645$ ($p < .001$), and a Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy indicated that the correlation matrix was favorable (KMO = .826). In other words, these results indicate that the items are appropriate for an EFA and should form relatively distinct factors or dimensions.

Exploratory Factor Analysis

A principal factor analysis (PFA), a type of EFA, was conducted to determine the dimensionality of the proposed measure. To reiterate, several initial criteria were considered to determine the number of factors to extract and eventually rotate. First, the researcher utilized the Kaiser criterion, effectively excluding factors with an eigenvalue less than one; this approach revealed a two-factor solution explaining 45.70% of the total variance in the intercorrelation matrix. Furthermore, factors that explained less than 5% of the variance were removed. Further inspection of the item communalities revealed six items with communalities less than .30 (i.e., 10, 14, 15, 16, 17, and 18); to optimize the amount of shared variance, these six items were removed. This left 13 items on the scale. A scree plot inspection supported the extraction of two of these factors). Figure 1 depicts the scree plot, which provides a visual suggestion of how many factors to retain; where the line bends ideally represents the number of factors to retain for rotation (Mvududu & Sink, 2013).

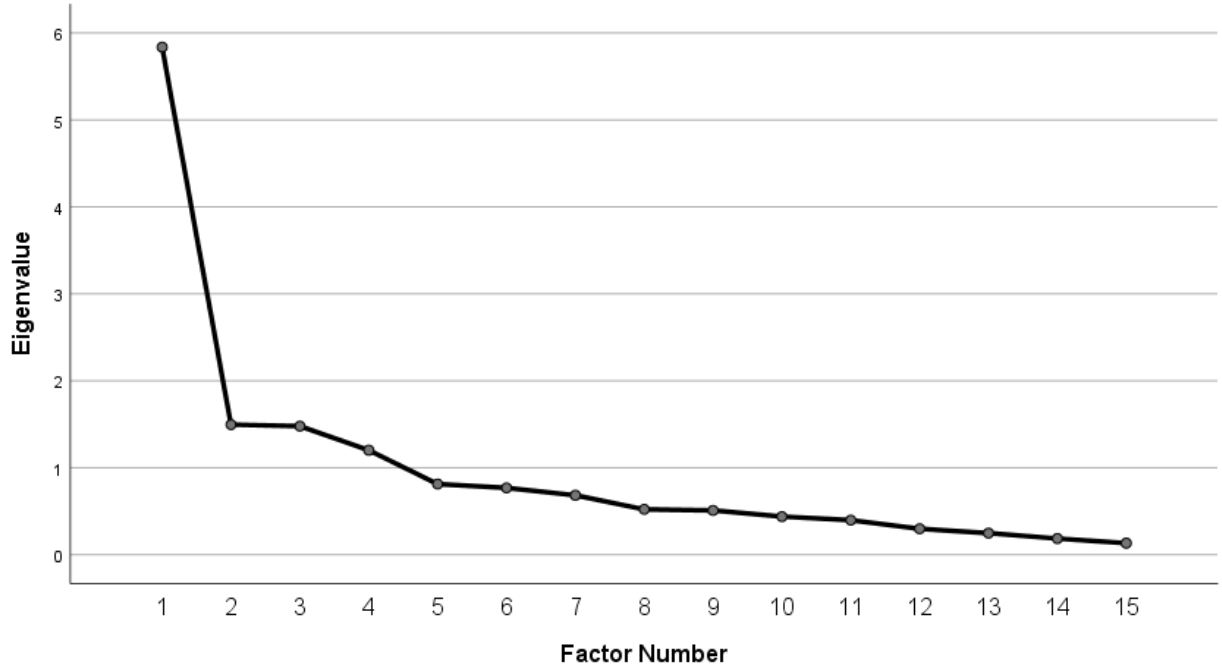

Figure 1 Scree Plot.

To supplement the scree plot findings, parallel analysis (PA; Horn, 1965) was computed. PA provides a more accurate estimate for factor retention. Specifically, PA uses a Monte Carlo simulation approach to factor retention/rotation, where a data set of random numbers (e.g., 100 iterations) having the same sample size and number of variables as in the researcher's data set (i.e., N = 320, 15 item, respectively), are subjected to PA. Watkins (2005) further explained that PA generates a set of random correlation matrices based upon the equivalent number of items and respondents as the data set. The random correlation matrices are thereby subjected to principal components analysis and the mean of their eigenvalues is computed and compared to the eigenvalues generated by the original research data (p. 344).

Furthermore, regarding parallel analysis, the *M*s and *SD*s of the replicated eigenvalues for each factor are then calculated, from which the 95th percentile value is obtained (95th percentile

= *M* + 1.65*SD*; Chang, 2014). These statistics are used as the criteria that each factor eigenvalue from the original research dataset is compared. The PA eigenvalues derived for each of the iterations are reported in Table 3. Factors are retained if its eigenvalue surpasses the 95th percentile of the simulated values (Chang, 2014). Essentially, a factor is retained if its eigenvalue is obviously greater (at 95th percentile) than the randomly derived eigenvalue (Ledesma & Valero-Mora, 2007). Watkins (2006) added that the criterion for factor extraction is where the eigenvalues generated by random data exceed the eigenvalues produced by the original research data. Figure 3 depicts the parallel analysis plot, and Table 3 provides the actual results. Overall, the PA plot and the findings support the retention of two factors.

Table 3

Results of the Parallel Analysis Using Factors

N cases	320
N variables/items	13
N datsets	100
%	95

Random Data Eigenvalues

Root	Means	Percentile
1.00	1.34	1.43
2.00	1.26	1.32
3.00	1.19	1.24
4.00	1.14	1.18
5.00	1.09	1.11
6.00	1.04	1.08

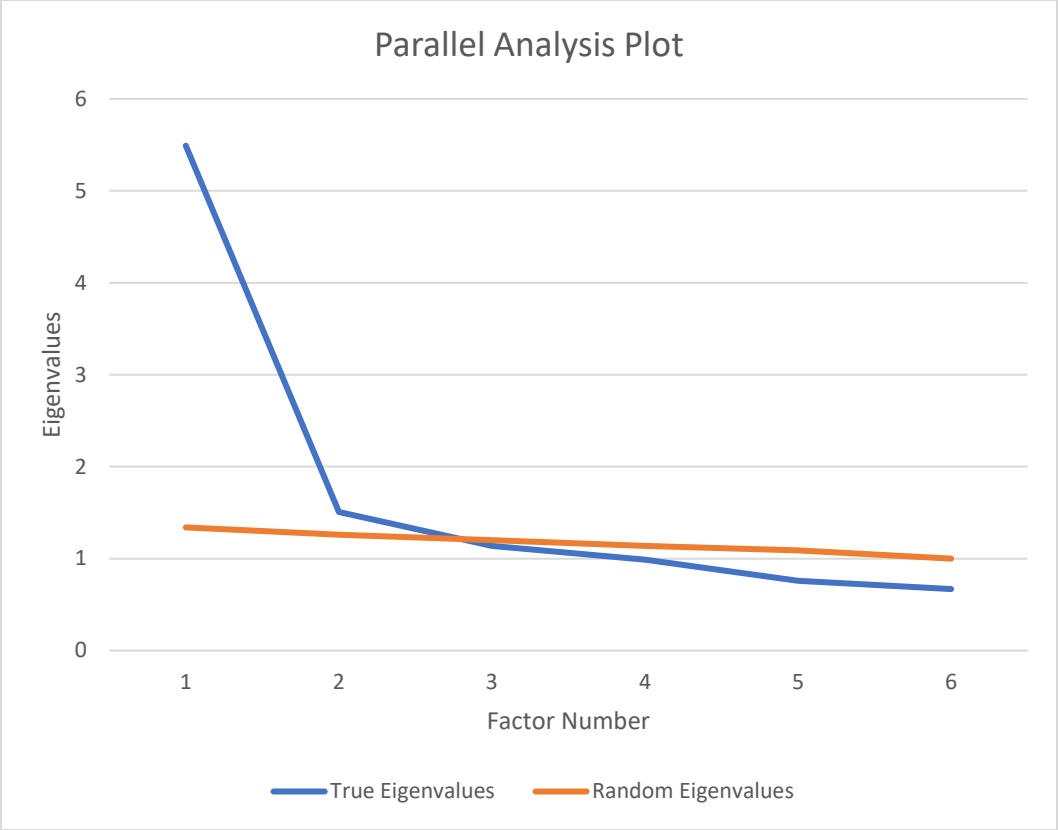

Figure 2. Parallel Analysis Plot.

Post-rotation analysis. Based on the visual inspection of the oblique rotation (direct oblimin, delta = 0), the researcher decided to use the pattern matrix as it provided the most interpretable solution (see Table 4 for the derived PFA pattern matrix). Factor retention criteria included (1) factor loadings greater than .30, (2) communalities greater than .30, and (3) limited item crossloadings. Most items had appropriate communalities, ranging from .33 - .63. A clear and interpretable factor pattern emerged. The rotated pattern matrix indicated a dominant factor (factor 1) accounting for 38.10% of the variance in the model. The second factor accounted for 7.61% of the variance in the total model. The following seven items loaded on the first factor: 7, 8, 11, 12, 13, 19, and 20. Figure 3 depicts the factor loading plot, which represents a graphical depiction of how items clustered together to form the latent factors.

Naming and reliability of the factors. The researcher aimed to develop an instrument that aligns with the tenets of the ASCA National Model (2019c). The total scale generated a Cronbach alpha of .878. Reliability analysis indicated that no item(s), once removed, could improve the internal consistency of the first factor (Cronbach alpha = .838). The researcher named the factor "appraisal and indirect student services" as the items reflects ways school counselors (1) work with school community members to support student achievement and (2) work with students to plan for secondary and postsecondary success. The following six items (Appendix A) loaded on factor two: 1, 2, 3, 4, 5, and 6 (Cronbach alpha = .819). The researcher named the second "instruction," because each item reflects methods school counselors work directly with students to support them in developing positive outcomes.

Table 4

PFA Pattern Matrix (N = 320)

	Factor 1 Appraisal & Indirect Student Services	Factor 2 Instruction	
Item	Loadings		h^2
Q20 I can help students with learning disabilities make informed decisions regarding postsecondary plans	**.827**		.576
Q19 I can provide assistance with developing transition/postsecondary plans for students with IEP's as appropriate	**.763**		.499
Q7 I can assist students with learning disabilities in setting personal long-term goals	**.691**		.544
Q8 I can assist students with learning disabilities in setting personal short-term goals	**.586**		.499
Q11 I can collaborate with families to understand the special needs of students with learning disabilities	**.461**		.339
Q12 I can advocate for the needs of students with learning disabilities during IEP team meetings	**.454**		.412
Q13 I can advocate for changes to school-wide policies and protocols to better serve students with learning disabilities	.**435**		.368
Q4 I can adjust classroom lessons to meet the needs of high-achieving students and low-achieving students simultaneously		**.720**	.440
Q5 I can adjust small group counseling sessions to meet the needs of high-achieving students and low-achieving students simultaneously.		**.682**	.432
Q1 I can adjust classroom lessons to help meet the needs of students with learning disabilities		**.656**	.457
Q6 I can break down a skill into its component parts to facilitate learning for students with learning disabilities		.**561**	.403
Q3 I can adapt small group counseling sessions to help meet the needs of students with learning disabilities		.**541**	.479
Q2 I can adapt individual counseling sessions to help meet the needs of students with learning disabilities		.**529**	.493
Eigenvalues	4.952	.989	

Table 4 Continued

% of Variance	38.094	7.606

Note. Blank cells represent factor loadings less than .30.

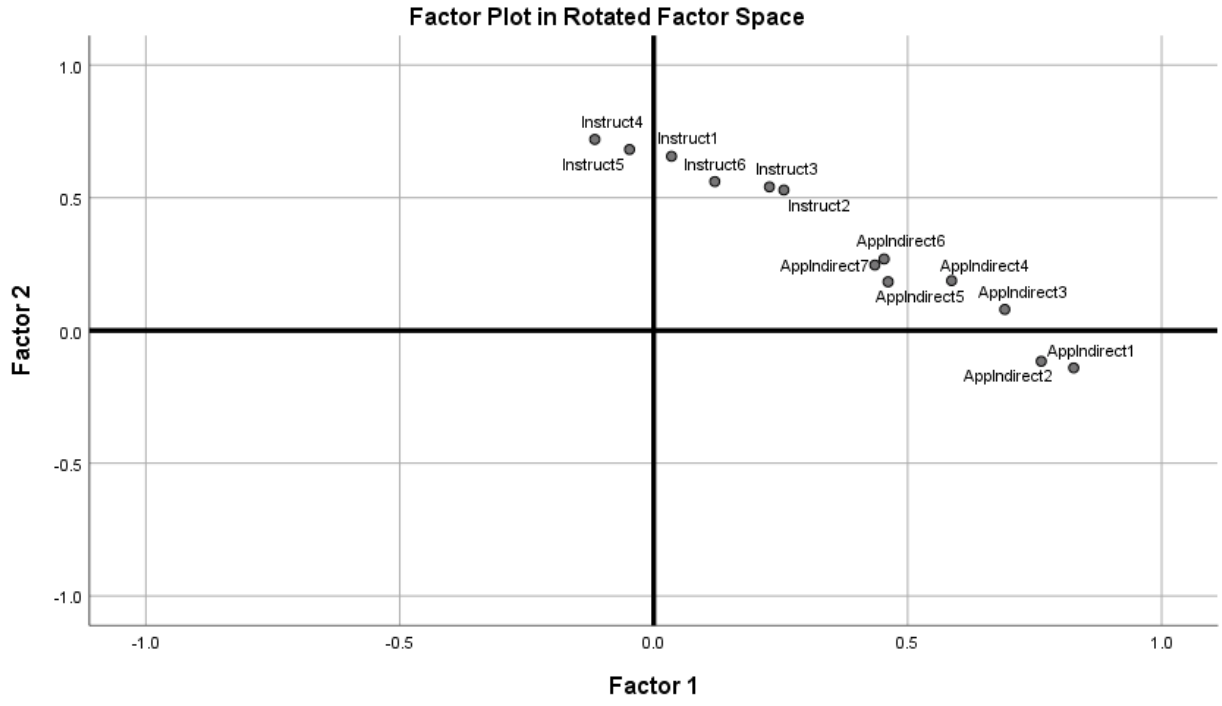

Figure 3. *Rotated factor plot.*

Multivariate Analysis of Variance

A number of multivariate analyses of variance (MANOVA) were conducted to answer the third research question about the extent to which significant group differences exist on factor or subscale scores. The independent variables (IV) were age, years of school counselor experience, school counselor caseload, previous teaching experience, and building level. Age

was designed to have four levels: 22-32 (n = 79), 33-38 (n = 74), 39-47%, (n = 87), and 48+ (n = 80). Years of school counseling experience had four levels: 1-3 years (n = 83), 4-6 (n = 73), 7-12 (n = 73), and 13+ (n = 91). Caseload was aggregated to three levels: 1-300 students (n = 103), 301-425 (n =107), and 426+ (n = 110). Previous teaching experience was a categorical variable with two levels, Yes (n = 131), and No (n = 189). Building level had three levels: elementary (n = 111), middle (n = 75), and high (n = 101). Due to the unequal cell sizes, the results of MANOVA reported below should be viewed with caution. Finally, partial eta squares are reported as effect sizes. According to Richardson (2011), partial eta squared (η_p^2) values of 0.001, 0.06, and 0.14 as benchmarks for small, medium, and large effect sizes, respectively.

Assumption checking for MANOVA. Numerous steps were taken to ensure the proper parametric assumptions were met to compute the MANOVAs. The researcher followed the assumption check sequence provided by Field (2013), including independence of observations, homogeneity of error variances, and normality. As mentioned above, the independent variables (IVs) were age, years of school counselor experience, school counselor caseload, previous teaching experience, and building level. The dependent variables were the summed factor dimension scores. Naturally, each participant is only counted once for each independent variable (e.g., a participant cannot be coded as both Latinx and African American). Therefore, the assumption of independence of observations was met. Given the significance noted in Bartlett's Test of Sphericity, $\chi^2(78) = 2074.64$ ($p < .01$), it can be assured that homogeneity of variance existed in the data set. As mentioned previously, the data were cleaned and screened to help ensure both multivariate and univariate normality. The results of the Levene's tests demonstrated that the assumption of homogeneity of error variance was met for both appraisal and indirect services (F[3, 316] = .67, p = .57) and instruction (F[3, 316] = .82, p = .49) dimensions.

MANOVA results. A series of MANOVAs were conducted with age, years of school counselor experience, school counselor caseload, previous teaching experience, and building level serving as independent variables. Cumulative factor scores for each of the two dimensions were used as dependent variables. A significant main effect emerged for prior teaching experience, F (2, 317) = 10.08, $p < .001$; Wilk's $\Lambda = .94$; $\eta_p^2 = .06$. School counselors with prior teaching experience scored higher on the "instruction" dimension ($M = 25.70$) compared to school counselors without prior teaching experience ($M = 24.15$). A significant main effect also emerged for building level on the "appraisal and indirect student services" dimension, $F(4, 566) = 11.38$, $p < .001$; Wilk's $\Lambda = .86$; $\eta_p^2 = .07$. First, middle school counselors ($M = 29.29$) scored higher than elementary school counselors ($M = 27.83$). Lastly, high school counselors ($M = 30.52$) scored higher than elementary school counselors ($M = 27.83$). Next, significant main effects emerged for school counselor age on the "appraisal and indirect student services" dimensions, $F(6, 630) = 2.50$, $p = .02$; Wilk's $\Lambda = .95$; $\eta_p^2 = .02$. First, school counselors between 39-47 ($M = 30.09$) scored higher than school counselors between 22-32 ($M = 28.39$). Lastly, school counselors 48+ ($M = 29.96$) scored higher than school counselors between 22-32 ($M = 28.39$). Figures 4, 5, and 6 illustrate the main effects for age, teaching experience, and building level, respectively. No significant effect was found for years of school counseling experience, $F(6, 630) = 1.13$, $p = .240$. Furthermore, no significant effect was found for school

counselor caseload, $F(4, 632) = 1.71$, $p = .15$. All interaction effects were nonsignificant.

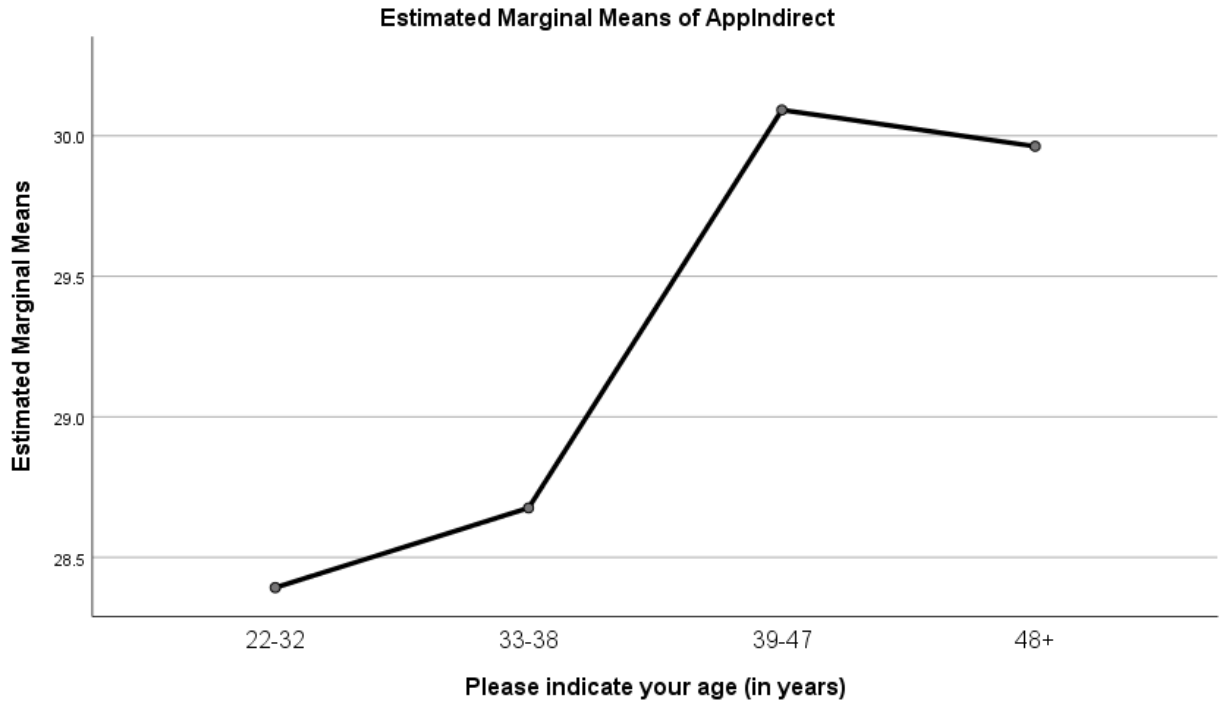

Figure 4. Estimated Marginal Mean of "appraisal and indirect student services"—Age.

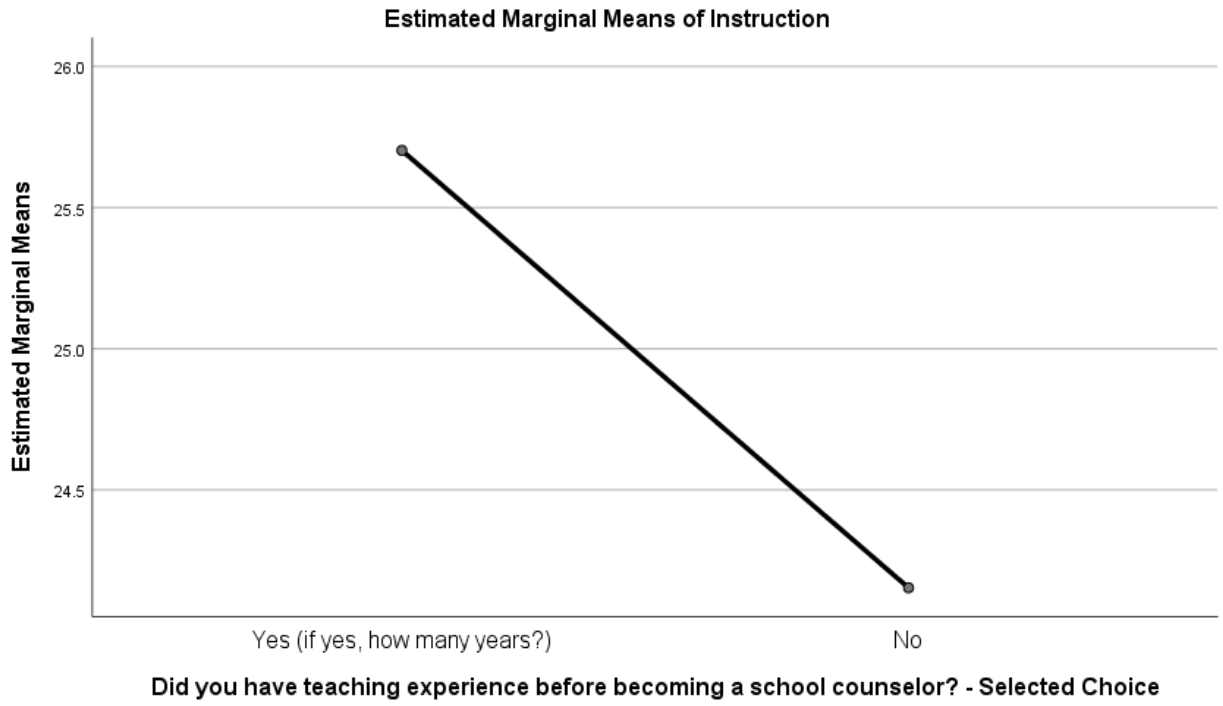

Figure 5. Estimated Marginal Mean of Instruction—Teaching Experience.

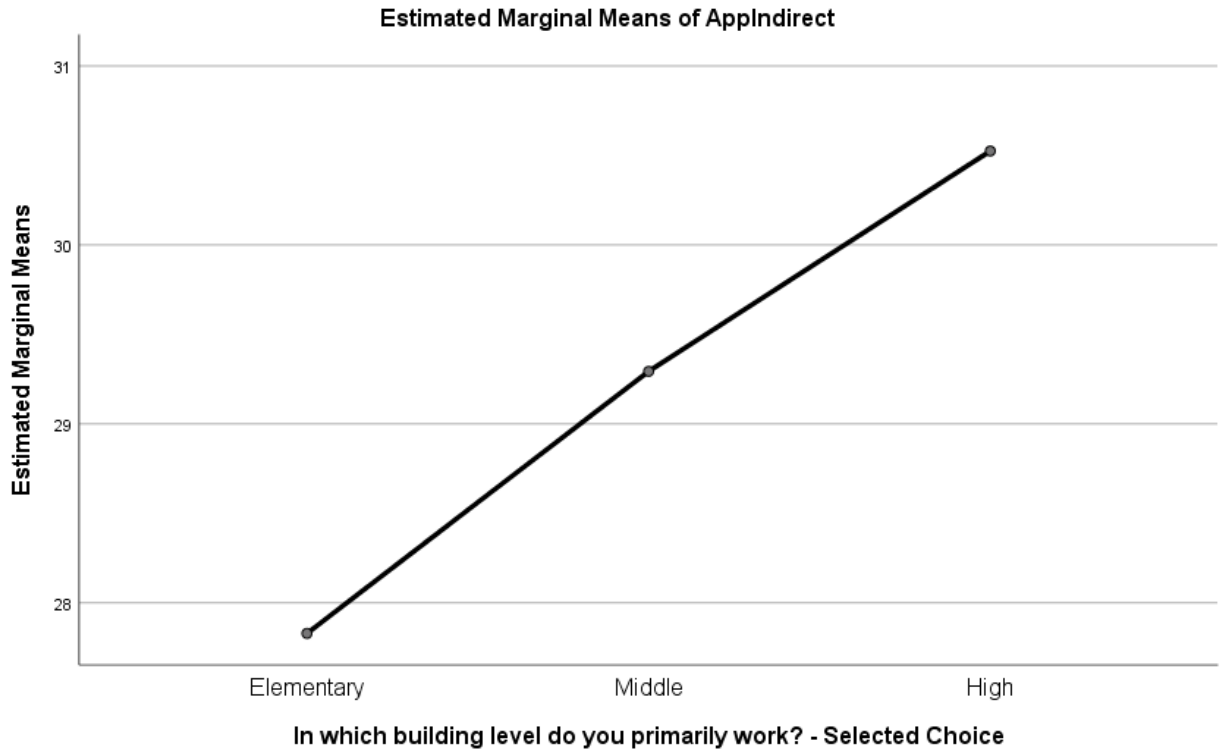

Figure 6. Estimated Marginal Mean of "appraisal and indirect student services"—Building Level.

Summary

A total of 320 participants, after removing multivariate outliers and individuals who did not meet eligibility criteria (e.g., school counselors working in private schools), completed the SLDSCSES. One item, Q9, was removed due to extraordinarily-high kurtosis and skew; six items (i.e., 10, 14, 15, 16, 17, and 18) were removed due to having exceptionally-low communalities. The results of the exploratory factor analysis using oblique rotation revealed an adequate two-factor solution explaining 45.70% of the variance in the correlation matrix. The derived factors were "appraisal and indirect student services" (Cronbach alpha = .838), and

"instruction" (Cronbach alpha = .819). Collectively, the instrument generated an alpha coefficient of .878.

The results of the post-hoc MANOVA revealed statistically significant group differences across a variety of demographic variables. Independent variables included age, years of school counselor experience, school counselor caseload, previous teaching experience, and building level. For prior teaching experience, school counselors with prior teaching experience scored higher on the "instruction" dimension compared to school counselors without prior teaching experience. For building level, middle school counselors scored higher than elementary school counselors on the "appraisal and indirect student services" dimension. Additionally, high school counselors scored higher than elementary school counselors on the "appraisal and indirect student services" dimension. For age, school counselors between 39-47 scored higher than school counselors between 22-32 on the "appraisal and indirect student services" dimension. Next, school counselors 48+ scored higher than school counselors between 22-32. No significant effect was found for neither years of school counseling experience nor caseload. Effect sizes (η_p^2) were mostly in the small to moderate range (less than .02 - .07). Lastly, no interaction effects were found.

To recap, this chapter provided the results of the study. The researcher discussed the research questions and hypothesis and detailed the results from both the exploratory factor analysis and MANOVA processes. The chapter ended with a summary of the significant effects identified through the MANOVA process. The following chapter provides a discussion of the findings.

CHAPTER FIVE

DISCUSSION

The primary purpose of this chapter is to interpret the results of the study in light of previous research in this area and self-efficacy theory. First, a summary of the problem will be provided. Following, the results of the research questions are detailed. Next, implications will be discussed, followed by a discussion of limitations and opportunities for future research.

Summary of the Problem

Over the past 60 years, the school counselor's roles and functions continue to evolve and expand (Gysbers, 2010). Although reality is vexing to the profession, the contemporary school counselor remains an integral component of the school community, working diligently to address *all students'* academic, social-emotional, and post-secondary needs (ASCA, n.d.-b). This position is endorsed by several relevant organizations and accrediting bodies, such as the American School Counselor Association (2019c) and the Council for the Accreditation of Counseling and Related Educational Programs (CACREP, 2015). While these proclamations are quite clear, the pertinent literature suggests some ambiguity regarding school counselors' belief in their abilities to effectively counsel and support students with learning disabilities, a sizeable population who often face increased academic, behavioral, and social obstacles to scholastic and lifelong success (Panicker & Chelliah, 2016; Kolodinsky et al., 2009; Learning Disabilities Association of America, 2013). Research suggests a relationship between beliefs (i.e., self-efficacy) and both student and school counselor outcomes (e.g., Mullen & Lambie, 2016). Despite these findings, at the time of the current study, no psychometrically validated instrument exists assessing school counselors' self-efficacy to counsel and support students with learning

disabilities. The Students with Learning Disabilities School Counselor Self-Efficacy Scale (SLDSCSES) was developed to help fill this gap in the literature.

The following section provides the research questions (RQ) related to the study. Each question will be addressed in the subsequent subsections. The research question will be restated in each subsection, followed by the interpretation of the results for the corresponding section.

RQ #1: Does the SLDSCSES possess internal consistency reliability?

The first research question addressed reliability of the SLDSCSES. It was anticipated that the reliability coefficients would be adequate in magnitude (i.e., the derived Cronbach alpha coefficients would be at least .70). When the inter-item correlation matrix was first examined, the preponderance of the SLDSCSES items correlated in the low-moderate to high range (r = .30 – .80), suggesting that the items are related enough to measure the same overall construct, yet distinct enough to form separate subscales related to the general construct (Mvududu & Sink, 2013). It is thus not unexpected that the reliability analysis, post-EFA, generated an overall alpha coefficient of .88, suggesting that practitioners can report a total score on the measure. The items comprising the first subscale or subscale (appraisal and indirect student services) were internally consistent across the sample (α = .84). Similarly, the second factor (instruction) was reliable (α = .82). In short, the inter-item correlations and alpha coefficients met the thresholds to indicate that the SLDSCSES possesses internal consistency reliability (Beavers et al., 2013; Cortina, 1993; Kahn, 2006).

As mentioned previously, the SLDSCSES was adapted from the Teaching Students with Disabilities Efficacy Scale (TSDES; Dawson & Scott, 2013). In the Dawson and Scott study, the researchers employed a principal components analysis (PCA) with orthogonal (varimax) rotation to develop a five-dimensional scale. The five dimensions were: instruction, professionalism,

teacher support, classroom management, and related duties. The entire scale had an alpha coefficient of 0.91. The subscales' alpha coefficients were .88, .84, .85, .88, and .78, respectively. Thus, the SLDSCSES and the TSDES have similar internal consistency reliability for the total and subscales.

RQ #2: Does the SLDSCSES demonstrate factorial validity?

The next research question focused on demonstrating the factorial validity of the SLDSCSES. The researcher expected that all the derived (post-EFA rotation) items comprising or marking each subscale will have a factor loading of .35 or higher. The data analysis revealed that the factor loadings ranged from .34 to .82. Additionally, the principal factor analysis process generated an instrument with two subscales: (1) appraisal and indirect student services and (2) instruction. Stated differently, the overall EFA supported the premise that the items were similar enough to measure a central construct (i.e., self-efficacy), yet distinct enough to create a multi-dimensional scale. A review of the dimensions provided evidence that the items logically clustered together.

Specifically, the scale had acceptable Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity values, suggesting the measure's items were factorable. The factor retention process resulted in a 13-item scale explaining 45.70% of the variance within the model. Furthermore, communalities ranged from .33 (moderate) to .64 (strong), showing that the factors explained substantial variance in each item. Only one item (Q11: I can collaborate with families to understand the special needs of students with learning disabilities.) had a communality less than .35. Furthermore, no substantial cross-loadings existed in the final instrument.

Although both studies attempted to validly assess self-efficacy with educational professionals, the factor structure found in the current investigation differed from the one

reported in the Dawson and Scott's (2013) TSDES research. The latter psychometric study using teachers as respondents derived five factors, accounting for 70.40% of the variance. The two PFA-derived factors reported in the current study explained 45.70% of the variance in the inter-correlation matrix. Ideally, scale items should account for at least 50% of the variance, but this threshold is not always achievable.

To explain the disparity in explained variance between the current and Dawson and Scott studies, it should be noted that the latter investigation used principal components analysis (PCA) rather than PFA. Whereas PFA generates common variance (h^2), removing unique variance (i.e., specific and error variance or $1-h^2$) in the process. PCA reports unique plus common variance as total variance (Mvududu & Sink, 2013); as a results in PCA, total variance (1) equals common variance (h^2). In short, by default, PCA accounts for more variance than PFA. Moreover, the current study deployed an oblique rotational method (direct oblimin) versus the orthogonal (varimax) approach used in the Dawson and Scott (2013) study. Oblique rotations explain a smaller amount variance, because they, unlike orthogonal rotations, consider the shared variance related to inter-factor correlations. In short, based on the guidelines provided by Mvududu and Sink (2013) and other sources (e.g., Dimitrov, 2012), the two-dimensional SLDSCSES demonstrated adequate factorial validity. Given the varying factor analytic methods deployed in the original study and this one, it is not surprising the resulting factor structures would differ.

RQ #3: Demographic Group Differences

The study also addressed the following question: Using demographic variables as independent variables, do significant group differences exist on subscale scores? The null hypothesis was: no statistically significant group differences existed on subscale scores. The MANOVA results revealed statistically significant group differences across several independent

variables; thus, the null hypothesis was rejected for these comparisons. These findings are expanded upon here.

Demographic differences by prior teaching experience. School counselors with previous teaching experience (i.e., experience teaching before becoming a full-time school counselor) scored significantly higher on the instruction dimension than school counselors without previous teaching experience. The effect size of this finding was negligible, however. This finding aligns with Bodenhorn and Skagg's (2005) previous work, noting increased self-efficacy in school counselors with both (1) prior teaching experience and (2) adequate training and understanding of the ASCA National Model. Most states do not require teaching experience as a prerequisite to earn school counselor certification (ASCA, n.d.-c). Furthermore, research suggests that prior teaching experience generally does not seriously impact actual school counselor effectiveness (Dahir & Stone, 2012; Stein & DeBerard, 2010). However, prior teaching experience was found to be related to *perceived* school counselor effectiveness (Bringman & Lee, 2008; Moyer & Yu, 2012). Lastly, many teaching skills (e.g., keeping student attention, checking for understanding, scaffolding, pedagogical techniques) translate well into instructional methods often employed by school counselors (e.g., classroom lessons, small group counseling sessions, and individual counseling sessions) (Akos, Cockman, & Strickland, 2007). Further interpretation and recommendations are offered later in this chapter.

Demographic differences by building level. At building level, middle school and high school counselors scored significantly higher than elementary school counselors on the "appraisal and indirect student services" dimension. In most urban and suburban middle and high school buildings, school counseling departments often consist of multiple school counselors who work in tandem to support students' diverse needs. Conversely, most elementary schools only

have one school counselor. A possible feeling of isolation could contribute to elementary school counselors' lower scores on this dimension. Moreover, research suggests that elementary school counselors are often asked to assume inappropriate or non-counseling-related roles (e.g., clerical duties, substitute teacher; Bardhoshi, Schweinle, & Duncan, 2014; Butler & Constantine, 2005; Cinotti, 2014). These obligations, including increased caseloads and role confusion may stymie elementary school counselors' time to be able to provide indirect student services, possibly contributing to lower scores on this dimension.

Demographic differences by age. For age, (1) school counselors between 39-47 and (2) school counselors 48+ scored significantly higher than school counselors between 22-32 on the "appraisal and indirect student services" dimension. The findings make sense given that older school counselors have more life experience and probably have held one or more professional positions before becoming a school counselor. Furthermore, these previous professional positions may have required job duties transferrable to both (1) the "appraisal and indirect student services" dimension and (2) K-12 education. This combination of life and professional experiences could help explain this observation.

RQ #4: Interaction Effects

The final research question was: Using demographic variables as independent variables, do significant interaction effects exist on subscale scores? The null hypothesis was that no statistically significant interaction effects exist on subscale scores. The results of the MANOVA supported the null hypothesis.

Summary of the Findings

The results of the study answered the first three research questions in the affirmative and the fourth research question related to interaction effects was not supported by the evidence. The

findings largely indicate that the SLDSCSES is a valid and reliable measure with two dimensions: (1) appraisal and direct student services and (2) instruction. The first dimension is the most robust one in terms of variance explained. These dimensions and corresponding items align with contemporary school counselor practice as outlined in the most recent version of the ASCA National Model (2019c). More specifically, an analysis of the MANOVA results indicated that school counselors with prior general education experience scored statistically higher on the instruction dimension than school counselors without prior general education experience. For building level, middle and high school counselors scored higher than elementary school counselors on the "appraisal and indirect student services" dimension. For age, school counselors ages 39 and older scored higher than school counselors between 22-32 (M = 28.39) on the "appraisal and indirect student services" dimension. For the most part, the effect sizes derived from the MANOVAs were small (partial eta squares largely less .05), suggesting very little practical or clinical significance. They largely accounted for no more than 7% of the variance in the various dependent measures.

In the next section, implications for school-based counseling practice and self-efficacy theory are explored.

Implications for Practice

School counseling profession. The Students with Learning Disabilities School Counselor Self-Efficacy scale (SLDSCSES) adds to the measurement and evaluation literature in the school counseling profession. The SLDSCSES appears to be the first validated instrument that assesses school counselors' self-efficacy to counsel and support students identified as having learning disabilities. Moreover, the measure can help connect research with practice. The succinct and ASCA-informed nature of the instrument can help both (1) counselor education

programs and (2) current school counselors achieve greater equity for youth identified as having learning disabilities, identifying critical preservice and in-service needs (e.g., transition planning, collaboration models and practice, differentiated school counseling instructional methods).

In-service school counselors. As mentioned previously, school counselors are key professionals in helping ensure that all students receive a high-quality equitable educational experience (ASCA, 2019c). Numerous sources cite obstacles faced by students with disabilities, including those with learning disabilities (Brobbey, 2018; McMahon et al., 2015; Rose et al., 2011). Given these differentiated outcomes, school counselors must feel confident in their abilities to support this population. The results of the SLDSCSES could help school counselors identify areas for which professional development is warranted. For example, a low score within the "advisement & indirect student services" subscale could indicate a need for professional development on special education legislation, collaboration methods, and other topics deemed salient based on school counselors' responses. Additionally, the ASCA-informed nature of the SLDSCSES can serve as an advocacy tool for appropriate school counselor duties.

School districts. The SLDSCSES could prove fruitful at the school district level. There is substantial variance in school districts' implementation and endorsement of the ASCA National Model. In fact, little contemporary research exists purporting the models school districts require their school counselors to use, if any model at all (Beale, 2004; Borders & Drury, 1992; Gysbers, 2004; Henderson, 1999). Many school districts have a "district level school counseling supervisor," an individual who typically provides administrative leadership and supervision for school counselors in their district in developing and maintaining a copacetic comprehensive school counseling program (ASCA, 2019b). Some school districts require their school counselors to align their comprehensive school counseling program with the ASCA National

Model, whereas others are not. More recently, ASCA (n.d. -d) has extended supports (e.g., district-wide trainings, ASCA National Model School District Portal) to school districts wishing to move toward ASCA's comprehensive school counseling model.

Specifically, school district leadership could use the SLDSCSES to help promote greater alignment with the National Model. They can do this by administering the scale to school counselors throughout the district. District-level leadership may want to consider making the scale anonymous, as research shows that anonymity often increases the authenticity of participants' responses (Ong & Weiss, 2000; Wildman, 1977). Through widespread dissemination and completion, district-level leadership can have a broader perspective of perceived strengths and areas for growth in their support of students with special needs. These areas for growth may serve as a clarion call for increased professional development opportunities for school counselors, helping support school districts' prioritization of graduation rates, standardized test performance, and postsecondary readiness. Lastly, the SLDSCSES can be used as a critical advocacy tool. ASCA (2019b) asserted that the district-level supervisor should play an important role in advocating for (1) comprehensive school counseling programs throughout the district, (2) appropriate ratios, (3) pressing student needs, and (4) appropriate school counselor duties, among other responsibilities. Administration of the SLDSCSES directly and indirectly supports many of the processes already incumbent upon district-level leadership. The results can help move the metaphorical needle toward increased congruence with the ASCA National Model (2019c), particularly as school counselors attempt to serve students with learning disabilities in a more systemic fashion.

Counselor education and preservice counselors. The SLDSCSES could inform and support counselor education training. Several sources, including ASCA's (2014b) position

statement for school counselor education programs and CACREP's (2015) standards, express the salience of multicultural competence and equity in counselor education programs. Given these documents and the unique needs and risk factors of students with learning disabilities, it is important that counselor education programs heed this guidance and take actionable steps to foster greater student competence.

More specifically, the SLDSCSES can be a valuable resource for school counselor education programs, given its unique purpose. School counselors have expressed various levels of preparedness to support students with disabilities (Kolodinsky et al., 2009; Milsom, 2002; Nichter & Edmonson, 2005; Romano et al., 2009; Studer & Quigney, 2004). This ambiguity may be exacerbated by school counselors often being required to fulfill inappropriate duties such as (1) coordinating 504 plans and (2) writing individualized education plans. While some school counselor education programs have a special education course, others may opt to intersperse experiences (e.g., class assignments, projects, special field experiences) to promote greater understanding and confidence in supporting students with disabilities.

Similarly, the SLDSCSES could be used as a formative and summative resource. School counselor educators can use the instrument to plan meaningful curricular and/or co-curricular experiences that enhance student growth and competence. Likewise, the tool can be a valuable resource in program evaluation and appraisal. Students' responses can signal potential program strengths and growing edges.

This data can prove fruitful in preparing for evaluations by CACREP (2015) and other relevant organizations. Several CACREP competencies relate to various elements within the SLDSCSES. For example, (1) "interventions to promote college and career readiness" (5.G.3.j) and (2) "techniques to foster collaboration and teamwork within schools" (5.G.3.l). Students'

responses to items such as “I can help students with learning disabilities make informed decisions regarding postsecondary plans” and “I can collaborate with families to understand the special needs of students with learning disabilities” can serve as a useful tool in helping counselor educators measure their program’s effectiveness in addressing these standards, along with others. While the entire scale has adequate internal consistency, practically, it makes more sense for practitioners to interpret the two subscale scores independently.

Self-efficacy theory development and application. As mentioned previously, self-efficacy refers to individuals’ beliefs in their ability to accomplish a task (Bandura, 1977, 1986, 1997). There are four components of self-efficacy, (1) vicarious experiences (i.e., witnessing friends and other individuals within one’s sphere of influence experience success), (2) social persuasion (i.e., receiving commendation for accomplishing a task), (3) physiological and emotional states (i.e., how individuals respond to stimulating experiences), and (4) mastery experiences (i.e., accomplishing a predetermined task), the latter of which is considered the most effective predictor of self-efficacy.

The SLDSCSES sought to ascertain school counselors’ self-efficacy to counsel and support students with learning disabilities. Participants’ responses to the survey items suggest that school counselors generally feel confident in their abilities to counsel and support students with learning disabilities (see Table 2). As illustrated in Table 2, the mean for most items fell between 4 (*agree*) and 5 (*strongly agree*). However, a few items fell within the 3 (*neither agree nor disagree*) to 4 (*agree*) range; namely, Q4 (I can adjust classroom lessons to meet the needs of high-achieving students and low-achieving students simultaneously; $M = 3.85$), Q5 (I can adjust small group counseling sessions to meet the needs of high-achieving students and low-achieving students simultaneously; $M = 3.98$), Q18 (I can provide professional development to

stakeholders about ways to best support the social-emotional wellness of students with learning disabilities; *M* = 3.89), Q19 (I can provide assistance with developing transition/postsecondary plans for students with IEP's as appropriate; *M* = 3.79), and Q20 (I can help students with learning disabilities make informed decisions regarding postsecondary plans; *M* = 3.90). While some items were not retained on the final scale, it is worth discussing the significance of the findings as they relate to school counselor self-efficacy. The follow paragraphs are separated by the four aspects of self-efficacy and will be discussed through the lens of school counselor age, previous teaching experience, and building level.

School Counselor Vicarious Experiences. Vicarious experiences refer to the ability to see others experience success. The results of the MANOVAs indicated that (1) school counselor age, (2) previous teaching experience, and (3) building level are statistically-significant factors that impact school counselors' self-efficacy, although the practical significance was largely small. Older school counselors (i.e., 39+) have theoretically had more opportunities to witness individuals (e.g., coworkers, family, and colleagues in related professions) accomplish tasks and experience success than younger school counselors (i.e., 21-38). Similarly, school counselors with prior teaching experiences have the added benefit of witnessing success in school-based settings (e.g., teacher commendation, verbal and/or written praise). Lastly, school counselors at the middle and high school levels are more likely to witness success by fellow school counselors than school counselors at the elementary level, who often serve as the sole school counselor in the building. All these components relate to increasing school counselors' vicarious experiences, thus impacting their self-efficacy.

School Counselor Social Persuasion. Social persuasion refers to when individuals receive commendation for accomplishing a task. As mentioned previously, elementary school

counselors often serve as the only school counselor in the building. While they may receive commendation from administrators and other stakeholders, they may not receive similar commendation from school counselors. School counselors may appreciate receiving feedback from a fellow school counselor, who is licensed, trained, and has a keen awareness of counseling skills and professional duties. This peer feedback may carry deeper meaning than feedback from other school stakeholders. Additionally, school counselors with prior teaching experience may have already received praise for their exemplary teaching and techniques, compared to school counselors who are entering schools for the first time.

School Counselor Physiological and Emotional States. Physiological and emotional states refer to how individuals respond to stimulating experiences. A large repository of research exists expressing how burnout impacts school counselors' wellbeing and effectiveness (Fye, Gnilka, & McLaulin, 2018; Limberg, Lambie, & Robinson, 2016; Mullen & Gutierrez, 2016). Contributing factors, such as high caseloads and inappropriate duties, add to school counselor burnout. Elementary school counselors often have much higher caseloads than middle and high school counselors. This makes it virtually impossible for school counselors to proactively address students' diverse needs, especially given the collateral duties they may have to complete. This can cause elementary school counselors to feel isolated and even incompetent. This burnout could manifest physiologically such as (1) lack of sleep, (2) fatigue, and (3) increased heart rate. Next, school counselors with previous teaching experience may not face as heightened physiological and emotional challenges as their peers without prior teaching experience, due to their awareness of the education context.

School Counselor Mastery Experiences. Mastery experiences refer to individuals successfully completing a given task. It makes sense that school counselors with prior teaching

experience would have already had mastery experiences, since they have experience within the education context; it also helps that many teaching responsibilities are highly transferable to the role of the school counselor. Elementary school counselors, due to increased caseloads and other variables, may not have as many mastery experiences as their colleagues at the middle and high school levels, whose caseloads are often not as imbalanced. Elementary school counselors may feel "stretched thin," and thus unable to satisfactorily accomplish given tasks. Lastly, older school counselors may have experienced success in past professions, whereas newer school counselors may have not built up the same cache of mastery experiences in their limited professional experiences. Next, research limitations and suggestions for future investigations related to this instrument are provided.

Research Limitations

This section will discuss the limitations of this study, focusing on threats to internal validity and external validity. Issues related to the factor analysis process are overviewed. External threats to validity compromise the study's generalizability to non-participants; internal threats to validity potentially compromise the study's integrity and fidelity (Mitchell & Jolley, 2013).

Threats to external validity. Representativeness is a threat to external validity and refers to the degree to which a study's respondents reflect the population being studied (Creswell, 2014). The researcher employed several measures to increase participant representativeness including sending study invitations to (1) school counseling associations throughout the United States, (2) over 25,000 school counselors via social media, (3) nearly 300 graduate program directors of school counseling programs across the country, and (4) various school counseling-related listservs and professional forums. Despite these efforts, disproportionalities exist among

gender, ethnicity/race, and other categorical variables (e.g., 93.1% of participants identifying as female). Furthermore, a demographic variable was not created for "geographic region" (e.g., mid-Atlantic, New England, Pacific Northwest), further obfuscating the representativeness of the study.

Additionally, the researcher employed both snowball and convenience sampling, to obtain participants. These methods, while expedient, introduce an additional threat to external validity (Creswell, 2014). Lastly, while the researcher attempted to recruit participants through a wide variety of avenues (e.g., professional associations, listservs, emailing school district representatives, emailing program directors of school counseling graduate programs), it is likely that many school counselors were not afforded the opportunity to complete the study; thus, it is probable that the sample does not adequately reflect the true diversity of perceptions and personal identities (i.e., demographics).

Threats to internal validity. There are multiple threats to internal validity, and these are summarized here. First, social desirability responding is one probable threat to internal validity. This notion refers to participants' penchant to select responses in a manner that looks favorable to them (Uziel, 2010). Thus, school counselors may have selected responses that do not truly reflect their actual level of self-efficacy. Relatedly, the voluntary nature of this study poses another threat to internal validity. Volunteers, as opposed to mandated test takers, may be more motivated to please the researcher. Thus, volunteer bias posed a threat to both internal and external validity as non-volunteers were not included in this study. History, another threat, refers to the time that passes during an experiment or study (Creswell, 2014). Participants were recruited to complete the survey commencing on September 20, 2019 thru October 5, 2019. Many public school systems begin the school year in either August or early September. Thus, the

aforementioned time frame is typically very busy for educators. Many school counselors are busy with several competing tasks, such as crisis response, multidisciplinary team meetings, paperwork, and addressing parent—student concerns. Thus, many participants, while willing to volunteer, may have been fatigued, given the often-frenetic nature of the beginning of the school year. This could have impacted the accuracy of responses.

Exploratory factor analysis. While PFA is a common method in instrument development and validation, it is not without its drawbacks related to internal validity. First, the results do not allow the researcher to make causal attributions. As mentioned previously, the results of the descriptive statistics (see Table 2) indicated moderate levels of nonnormality in the item distributions. In EFA, normally-distributed data are ideal in enhancing the factor solution (Mvududu & Sink, 2013). While not required, meeting this parametric assumption may have enhanced the psychometric properties of the developed instrument. Furthermore, the factor analysis process, as completed in this study, has many subjective components including (1) expert review, (2) naming of factors, (3) item creation, (4) naming of factors, and (5) factor retention. Lastly, exploratory factor analysis is used to generate—not test—a theory (Mvududu & Sink, 2013). Thereby, the researcher does not know if the findings are generalizable to other settings. Furthermore, research suggests that a meritorious factor structure explains at least 50% of the shared variance of the total model (Beavers et al., 2013). The exploratory factor analysis process revealed that the SLDSCSES explained 45.70% of the shared variance, suggesting the presence of undesirable specific variance. Additionally, while the SLDSCSES contains two factors, the overwhelming majority of the variance (i.e., 38.09%) is explained by the first factor, appraisal and indirect student services, leaving minimal explained variance (i.e., 7.61%) for the

second factor, instruction. While all but one of the items have an acceptable communality, many are low enough to suggest the presence of sizeable specific variance.

Suggestions for Future Research

The results, implications, and limitations of the present study provide a litany of opportunities for future research. One critique of quantitative research is the lack of thick descriptions and contextualization often afforded through qualitative measures (e.g., focus groups, individual interviews, extensive time in the field; Leedy & Ormrod, 2015). Thus, it would be beneficial to conduct a qualitative study on school counselors' experiences counseling and supporting students with learning disabilities. This could help provide necessary context to the two identified dimensions. Through focus groups and individual interviews, participants can provide greater depth of information. Similarly, extensive time in the field (i.e., public schools) can provide the researcher greater context into structural and systemic barriers impacting both school counselors and students with learning disabilities. Additionally, as mentioned previously, "learning disabilities" comprises a wide net of specific disabilities. There may be great benefit in measuring school counselors' self-efficacy related to specific learning disabilities (e.g., dyslexia) instead of generalizing to virtually all learning disabilities. This may reduce the number of confounding variables that could bias the study's results.

Furthermore, while students with learning disabilities comprise the largest percentage of students with disabilities, other subcategories, such as emotional disabilities, experience poorer academic, behavioral, social, and post-secondary outcomes (National Center for Education Evaluation and Regional Assistance, 2014). Given these heightened inequities, developing similar instruments for these populations could prove fruitful in supporting school counselors in their efforts to eradicate disparities and scholastic and post-secondary outcomes and

opportunities. Additionally, the school counseling profession is constantly evolving, like issues faced by the students whom they serve. Given these evolutions, it is possible that the SLDSCSES would need to eventually be modified to adhere to eventual changes within the profession.

Lastly, completion of a confirmatory factor analysis (CFA) could help substantiate or reject the self-efficacy conceptual framework used in the exploratory factor analysis process. Through CFA, the researcher would use the instrument with another sample to determine if the underlying dimensionality aligns with the one that arose from the EFA process. To accomplish this, the researcher would follow the CFA process as reviewed, for example, by Mvududu and Sink (2013) and Sass (2011). In short, the two dimensions should be cross-validated with another representative sample of practicing school counselors.

Summary and Conclusion

The purpose of this study was to develop and validate the Students with Learning Disabilities School Counselor Self-Efficacy Scale (SLDSCSES). Employing exploratory factor analysis, the researcher sought to determine and extract the latent factors comprising the SLDSCSES. Additionally, the researcher aimed to determine if there were any statistically significant group differences in school counselor self-efficacy by the provided categorical variables.

In the first phase of the psychometric study, the EFA extracted an adequate two-dimensional factor solution. The two dimensions were (1) appraisal and direct student services and (2) instruction. The first factor essentially reflects ways school counselors (1) work with school community members to support student achievement and (2) work with students to plan for secondary and postsecondary success, while the second appraises methods school counselors work directly with students to support them in developing positive outcomes.

In the next phase, the internal consistency of the measure was established. The findings revealed a whole-scale alpha coefficient of .88. The first subscale, appraisal and indirect student services, had an alpha coefficient of .84. The second subscale, instruction, had an alpha coefficient of .82.

Finally, a series of MANOVAs were computed to determine the presence of potential group differences among subscale scores. The multivariate comparisons indicated that school counselors with prior teaching experience scored significantly higher on the "instruction" dimension compared to school counselors without prior teaching experience. At the building level, middle and high school counselors scored significantly higher than elementary school counselors on the "appraisal and indirect student services" dimension. For age, school counselors ages 39+ scored higher than school counselors between 22-32 on the "appraisal and indirect student services" dimension. Interaction effects were nonsignificant. It should be noted that although the main effects for teaching experience and grade level on the dependent variables (factor scores) were statistically significant, estimates of effect sizes (partial eta squares) were relatively small, suggesting that these group differences have limited clinical significance. Interpretations of these findings for school counselor training and practice should thus be done with caution.

Overall, the results from this psychometric study provide initial evidence that the SLDSCSES possesses factorial validity and adequate internal consistency reliability. With appropriate safeguards, the instrument can be used to assess school counselors' self-efficacy in supporting students identified as having learning disabilities. Implications for practice and research limitations, along with future research recommendations, were outlined.

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Appendix A

Students with Learning Disabilities School Counselor Self-Efficacy Scale

Part I: Students with Learning Disabilities School Counselor Self-Efficacy Scale

Directions: Thank you for agreeing to participate in this study. First, please respond to the following 20 questions. Next, you will fill out general information on your background. Overall, both parts of the inventory should take 5-10 minutes to complete. All your responses will be kept in the strictest confidence.

Select your response using the following rating scale:

1= Strongly Disagree (SD); 2= Generally Disagree (GD); 3= Neither Disagree nor Agree (NDA); 4= Generally Agree (GA); 5= Strongly Agree (SA)

Statements	**Circle one answer for each statement**				
	SD	**GD**	**NDA**	**GA**	**SA**
1. I can adjust classroom lessons to help meet the needs of students with learning disabilities	**1**	**2**	**3**	**4**	**5**
2. I can adapt individual counseling sessions to help meet the needs of students with learning disabilities.	**1**	**2**	**3**	**4**	**5**
3. I can adapt small group counseling sessions to help meet the needs of students with learning disabilities.	**1**	**2**	**3**	**4**	**5**
4. I can adjust classroom lessons to meet simultaneously the needs of high-achieving students and low-achieving students.	**1**	**2**	**3**	**4**	**5**
5. I can adjust small group counseling sessions to meet simultaneously the needs of high-achieving students and low-achieving students with learning disabilities	**1**	**2**	**3**	**4**	**5**
6. I can break down a skill into its component parts to facilitate learning for students with learning disabilities.	**1**	**2**	**3**	**4**	**5**
7. I can assist students with learning disabilities to set personal long-term goals.	**1**	**2**	**3**	**4**	**5**
8. I can assist students with learning disabilities to establish personal short-term goals.	**1**	**2**	**3**	**4**	**5**
9. I can be an effective team member, working collaboratively with other teachers, paraprofessionals, and administrators to help students with learning disabilities reach their goals.	**1**	**2**	**3**	**4**	**5**
10. I can collaborate with families to understand the special needs of students with learning disabilities.	**1**	**2**	**3**	**4**	**5**
11. I can consult with an intervention specialist or other specialist when I need help.	**1**	**2**	**3**	**4**	**5**
12. I can advocate for the needs of students with learning disabilities during IEP team meetings.	**1**	**2**	**3**	**4**	**5**
13. I can advocate for changes to schoolwide policies and protocols to better serve students with learning disabilities.	**1**	**2**	**3**	**4**	**5**
14. I can encourage students in my school(s) to become allies for students with learning disabilities.	**1**	**2**	**3**	**4**	**5**
15. I can inspire teachers in my school(s) to become allies for students with learning disabilities.	**1**	**2**	**3**	**4**	**5**

16. I can help create a school environment that is welcoming for students with learning disabilities.	**1**	**2**	**3**	**4**	**5**
17. I can create an office environment that is open and welcoming for students with learning disabilities.	**1**	**2**	**3**	**4**	**5**
18. I can provide professional development to stakeholders about ways to best support the social-emotional wellness of students with learning disabilities.	**1**	**2**	**3**	**4**	**5**
19. I can provide assistance, as appropriate, with developing transition/postsecondary plans for students with learning disabilities.	**1**	**2**	**3**	**4**	**5**
20. I can help students with learning disabilities make informed decisions regarding postsecondary plans.	**1**	**2**	**3**	**4**	**5**

Please continue on the backside of the page

Part II: Background Information

Directions: Please take a few minutes to provide basic demographic information. No identifying information will be requested, and you will remain anonymous.

1. Gender: _____
2. Age: _____
3. Ethnicity: _____
4. My graduate counseling program was CACREP accredited: Yes, No, Not Sure, In Process (Circle One)
5. How long have you been a school counselor? _____ (years)
6. Approximately how many students are on your caseload? _____
7. What is the urbanicity of your school(s)? _____ (e.g., Rural, Urban, Suburban)
8. Did you have any teaching experience that you assisted students with learning disabilities prior to becoming a school counselor? Yes, No (If yes, briefly explain)

_____

9. Did you have any special education teaching experience prior to becoming a school counselor? Yes, No (If yes, briefly explain)

_____

10. In which building level do you primarily work? (e.g., Elementary, Middle, High, Other) please specify:_____

Thank you for your participation

Appendix B

Inter-Item Correlation Matrix

Variable	*M*	*SD*	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
Q1	4.1	.75	-	.43**	.44**	.60**	.36**	.46**	.30**	.31**	.26**	.26**	.30**	.31**	.31**	.22**	.35**	.30**	.24**	.30**	.29**	.30**
Q2	4.5	.61	.43**	-	.66**	.30**	.42**	.43**	.43**	.47**	.28**	.35**	.34**	.49**	.40**	.25**	.35**	.32**	.44**	.30**	.30**	.31**
Q3	4.3	.66	.44**	.66**	-	.29**	.43**	.43**	.43**	.44**	.20**	.31**	.36**	.43**	.39**	.28**	.28**	.31**	.31**	.29**	.30**	.28**
Q4	3.9	.90	.60**	.30**	.29**	-	.58**	.39**	.20**	.23**	.20**	.19**	.22**	.28**	.25**	.28**	.27**	.25**	.15**	.30**	.22**	.26**
Q5	4.0	.81	.36**	.42**	.43**	.50**	-	.38**	.27**	.31**	0.1	.25**	.26**	.29**	.27**	.32**	.28**	.26**	.22**	.25**	.20**	.23**
Q6	4.1	.76	.46**	.43**	.43**	.39**	.38**	-	.39**	.42**	.22**	.28**	.29**	.34**	.36**	.22**	.23**	.24**	.18**	.34**	.24**	.22**
Q7	4.3	.73	.30**	.43**	.43**	.20**	.27**	.39**	-	.84**	.24**	.36**	.41**	.34**	.38**	.32**	.31**	.30**	.39**	.31**	.39**	.52**
Q8	4.4	.63	.31**	.47**	.44**	.23**	.31**	.42**	.84**	-	.25**	.41**	.45**	.38**	.36**	.31**	.29**	.26**	.44**	.28**	.31**	.40**
Q9	4.6	.67	.26**	.28**	.20**	.20**	0.1	.22**	.24**	.25**	-	.36**	.37**	.47**	.30**	.23**	.32**	.24**	.34**	.16**	0.1	.15**
Q10	4.6	.51	.26**	.35**	.31**	.19**	.25**	.28**	.36**	.41**	.36**	-	.52**	.46**	.28**	.23**	.33**	.23**	.40**	.34**	.28**	.24**
Q11	4.5	.51	.30**	.34**	.36**	.22**	.26**	.29**	.41**	.45**	.37**	.52**	-	.49**	.43**	.35**	.39**	.33**	.43**	.35**	.34**	.33**
Q12	4.8	.43	.31**	.49**	.43**	.28**	.29**	.34**	.34**	.38**	.47**	.46**	.50**	-	.57**	.31**	.41**	.27**	.38**	.41**	.42**	.37**
Q13	3.9	.95	.31**	.40**	.39**	.25**	.27**	.36**	.38**	.36**	.30**	.28**	.43**	.57**	-	.45**	.46**	.35**	.28**	.41**	.37**	.35**
Q14	4.3	.66	.22**	.25**	.28**	.28**	.32**	.22**	.32**	.31**	.23**	.23**	.35**	.31**	.45**	-	.60**	.51**	.38**	.29**	.18**	.20**
Q15	4.4	.64	.35**	.35**	.29**	.27**	.28**	.23**	.31**	.29**	.32**	.33**	.39**	.41**	.46**	.60**	-	.54**	.38**	.33**	.29**	.35**
Q16	4.5	.51	.30**	.32**	.31**	.25**	.26**	.24**	.30**	.26**	.24**	.23**	.33**	.27**	.35**	.51**	.54**	-	.46**	.28**	.18**	.22**
Q17	4.8	.43	.24**	.44**	.31**	.15**	.22**	.18**	.39**	.44**	.34**	.40**	.43**	.38**	.28**	.38**	.38**	.46**	-	.26**	.22**	.23**
Q18	3.9	.95	.30**	.30**	.29**	.30**	.25**	.34**	.31**	.28**	.16**	.34**	.35**	.41**	.41**	.29**	.33**	.28**	.26**	-	.40**	.33**
Q19	3.8	1.0	.29**	.30**	.30**	.22**	.20**	.24**	.39**	.31**	0.1	.28**	.34**	.42**	.37**	.18**	.29**	.18**	.22**	.40**	-	.80**
Q20	3.9	1.0	.30**	.31**	.28**	.26**	.23**	.22**	.52**	.40**	.15**	.24**	.33**	.37**	.35**	.20**	.35**	.22**	.23**	.33**	.80**	-

*$p < .05$; ** $p < .01$.

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