

ACTUAL AND PERCEIVED IDEAL PRACTICES OF SCHOOL PSYCHOLOGISTS:
A REGIONAL AND STATE-LEVEL COMPARISON OF ROLE DISCREPANCIES
TO THE NATIONAL ASSOCIATION OF SCHOOL PSYCHOLOGISTS
PRACTICE MODEL

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ABSTRACT

Discrepancies between recommended and actual practices of school psychologists have plagued the field for decades. Previous studies have examined and identified differences in school psychology practices based upon geographical location within the United States as well as between community settings (e.g., rural, urban). The present study sought to fill a gap in the literature (Hosp & Reschly, 2002) by examining the actual and perceived needed practices of school psychologists in the East South Central (ESC) census division of the United States and compare those practices to the National Association of School Psychologists (NASP) Practice Model (NASP, 2020c). Sixty-five school psychologists from the ESC division completed an adapted and reproduced version of the NASP Membership Survey (Walcott & Hyson, 2018) measuring a number of demographic variables as well as their engagement in a variety of school psychologist activities and services using a 7-point Likert-scale. Participants rated their actual practice during the most recently completed school year and rated the level of engagement in those same practices they thought was needed to best serve students in their district during a typical school year. Results indicated that as a whole, school psychologists in the ESC division do not engage in a comprehensive service delivery model as recommended by NASP. Rather, their perceived need for services was more closely aligned to the NASP Practice Model (NASP, 2020c). State-level comparisons indicated that school psychologists in Alabama practice under a traditional gatekeeper of special education model (Merrell et al., 2006) compared to their counterparts in Kentucky and Tennessee. School psychologists in Kentucky reported more engagement in mental-health related services than participants from other states. Community-

level comparisons indicated that school psychologists practicing in urban settings are more engaged in a comprehensive service delivery model than those practicing in rural or suburban areas. No specific practices were identified as more needed than others by school psychologists in rural settings. Implications for future research include analysis of organizational factors contributing to discrepancies with implications for practice related to advocacy efforts.

DEDICATION

I dedicate this work to my family. To my husband, Andy – thank you for always believing in, encouraging, and supporting me through the highs and lows of the past few years. To my stepdaughter, Olivia – I hope this serves to model for you that we women do not have to choose between our dreams and our family, because my dream has been to have both and I am living that dream. Finally, to my son, Colton – you are the one person who has been with me from the start of this journey when I completed a final exam for a doctoral statistics course mere hours before heading to the hospital to deliver you. Your sweet little 4-year-old voice once told me, “You better cross that finish line. You’ve got to win,” before my first half marathon. Those words have echoed with me over the past three years during this mental race of endurance. I hope this work can one day inspire you towards achieving your goals as much as you inspire me every day to achieve mine.

LIST OF ABBREVIATIONS AND SYMBOLS

APA	American Psychological Association
EAHCA	Education for All Handicapped Children Act of 1975
ESC	East South Central
ESSA	Every Student Succeeds Act
IDEA	Individuals with Disabilities Education Act of 2004
IEP	Individualized Education Program
MTSS	Multi-Tiered Systems of Support
NASP	National Association of School Psychology
PBIS	Positive Behavior Intervention Supports
RTI	Response to Intervention
SBMH	School-Based Mental Health
SEL	Social-Emotional Learning

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CHAPTER I

INTRODUCTION

Introduction

Childhood mental health has received increased attention over the past several decades (U.S. Public Health Service, 2000) as prevalence rates of mental health disorders in children and adolescents have increased. In fact, current prevalence rates suggest that about 20% of youth ages 6 to 17 have a diagnosable mental health disorder (American Psychological Association [APA], 2020; Whitney & Peterson, 2019), and suicide is currently the second leading cause of death among youth ages 10 to 24 (Heron, 2019). Additionally, mental health experts have already found an elevation in adverse mental health needs as a result of the current global health crisis caused by the COVID-19 pandemic (Czeisler et al., 2020), and typical prevalence rates of social-emotional or behavioral concerns are predicted to double or triple as a result of the pandemic (NASP, 2020d).

Researchers, legislators, and mental health proponents alike acknowledge the need for more mental health services and resources accessible to children. In fact, President Joe Biden announced his campaign platform to double the number of mental health providers in schools (Biden for President, 2021). Despite the growing demand for mental health services targeted to children and adolescents, nearly half of children with a mental health disorder in the United States do not receive the mental health care they need (Whitney & Peterson, 2019). One significant barrier to accessing childhood mental health services is lack of resources. Tyler et al. (2017) reported a severe shortage of providers in the majority of our nation's states. Given the

amount of time children spend in school as well as the number of children enrolled in schools, schools are an optimal setting for mental health services and resources to be delivered (Evans, 1999; Hellmuth, 2018). The most recent reauthorization of the Elementary and Secondary Education Act of 1965, more commonly referred to as the Every Student Succeeds Act (ESSA) of 2015, addressed schools' roles in addressing childhood mental health concerns by authorizing multiple sources to fund comprehensive mental health services including prevention, identification, and targeted interventions for students (National Association of School Psychologists [NASP], 2016). ESSA also specifically names certain professionals as school-based mental health (SBMH) services providers: "a State-licensed or State-certified school counselor, school psychologist, school social worker, or other State-licensed or certified mental health professional qualified under State law to provide mental health services to children and adolescents" (2015).

School psychologists possess a unique skillset to help meet the unaddressed mental health needs of today's youth (Splett et al., 2013; Splett & Maras, 2011). One practitioner offered the following definition for the profession: "the psychologists who know the most about education and the educators who know the most about psychology" (Caci, n.d.). Often reported as a stressful but rewarding and flexible job, U.S. News and World Report (2020) ranked the job as school psychologist as the second-best social services job and ranked it as the 36th out of 100 best jobs in the United States.

The field of school psychology has progressed toward more comprehensive service delivery over the past two decades in response to the call for role expansion and growing demand for mental health services. For example, school psychologists have traditionally been the gatekeepers of special education, conducting psychoeducational evaluations in order to aid in the

identification of students who have disabilities under the Individuals with Disabilities Education Act (IDEA, 2004). However, over the past 20 years, the field of school psychology has shifted its focus from assessment and working primarily with children receiving special education services to more comprehensive services with a focus on preventive services for all students (NASP, 2020c). The NASP Practice Model, which highlights 10 domains for professional practice, serves as the blueprint for this comprehensive service delivery model for school psychologists (NASP, 2020c). While professional standards for the field have evolved in response to a growing need for more mental health services, actualization of school psychologists' practices reflecting this shift is lagging. Multiple studies document the expansion of school psychologists' practices and roles over the past several decades and the gap in between preferred and actual practices (Bahr et al., 2017; Benson et al., 2019; Hosp & Reschly, 2002; Lewis et al., 2008; McNamara et al., 2019; Newman et al., 2018; Sotelo-Dynega & Dixon, 2014; Stoiber & Vanderwood, 2008; Walcott & Hyson, 2018). Given the growing demand for school-based mental health provision and the expertise of school psychologists to help meet this demand through shifts towards more comprehensive service delivery models, an examination of school psychologists' current actual roles and services is warranted.

Statement of the Problem

As mental health needs are becoming more prominent in school-aged children, the need for more school-based mental health (SBMH) professionals such as school psychologists is becoming recognized and endorsed by stakeholders. This growing demand has resulted in multiple revisions of the national recommended service delivery model by NASP. Although the NASP Practice Model (2020b) has helped to define and guide comprehensive school psychological service delivery, field practitioners' roles and practices continue to vary across

regions, states, and settings (Bahr et al., 2017; Hosp & Reschly, 2002; McNamara et al., 2019; Walcott & Hyson, 2018).

The field of school psychology in general has made significant gains in expanding its origins to supplement assessment role functions. However, national surveys indicate that many school psychologists are grossly under-utilized in their actual school-based practice with assessment related activities consuming the majority of their time (Benson et al., 2019; Lewis et al., 2008; McNamara et al., 2019; Sotelo-Dynega & Dixon, 2014; Stoiber & Vanderwood, 2008). For the past 50 years, school psychologists' actual roles and practices are discrepant from what is recommended by the national model for comprehensive and integrated services.

Preferred and ideal comprehensive service delivery in certain regions of the United States is hindered by organizational barriers such as high student-to-school psychologist ratios resulting from workforce shortages and limited professional development opportunities due to budget constraints (Hosp & Reschly, 2002; Walcott & Hyson, 2018). However, those preferred and ideal service deliveries are being facilitated in specific states with supportive organizational factors such as educational initiatives, policy, and legislation (Bahr et al., 2017). With increasing recognition of the need for mental health services in schools by national and state legislators, some school systems are partnering with community providers to deliver these services. For example, in 2010, Alabama's Department of Mental Health and State Department of Education partnered together to develop the School Based Mental Health Services Program (Alabama Department of Mental Health, n.d.) to help fund mental health services for students provided by master's level therapists through community mental health centers (Florence City Schools, 2018).

In 2019, 61 of Alabama's 138 public school systems participated in the School Based Mental Health Services program (Alabama Department of Mental Health, n.d.). While this partnership between Alabama schools and community providers is both beneficial and necessary, it is not sufficient to meet the demands of mental health needs in schools as it focuses primarily on tertiary rather than primary, preventive services. In contrast, Tennessee's Comprehensive School-Based Mental Health Resource Guide (Tennessee Department of Education, 2018), which was modeled from Colorado and Wisconsin's examples, is based upon a comprehensive multi-tiered systems of support framework to promote preventive wellness practices as well as responsive services. In addition, state laws and Medicaid policies differ in their provisions for school psychologists to bill for reimbursable mental and behavioral health services despite being federally identified as a qualified provider (Eklund et al., 2017). Federal and state policies and legislation drive state funding for mental health services which in turn impacts availability of personnel and range of SBMH services.

In essence, although school psychologists possess the knowledge, skills, and desires to provide a range of comprehensive and integrated services to students, their actual practices do not reflect the recommended standards of the field or preferences of its practitioners. Furthermore, differences between states' educational policies and legislations may impact the extent to which school psychologists' practices align with NASP standards.

Statement of Purpose

Many national studies have examined the roles and activities of school psychologists (Bramlett et al., 2002; Curtis et al., 1999; Curtis et al., 2002; Filter et al., 2013; Lewis et al., 2008; Nastasi et al., 1998; Reschly, 2000; Stoiber & Vanderwood, 2008; Walcott & Hyson, 2018). In fact, since 1990, NASP has collected demographic and professional practice data

through surveys of its members every five years (McNamara et al., 2019). In addition, numerous studies have explored discrepancies between preferred, ideal, and actual practices of school psychologists (Agresta, 2004; Farling & Hoedt, 1971; Filter et al., 2013; Gilman & Medway, 2007; Hagemeyer et al., 1998; Hosp & Reschly, 2013; Meacham & Peckham, 1978; McNamara et al., 2019; Peterson et al., 1998; Reschly & Wilson, 1995; Watkins et al., 2001; Worrell et al., 2006), as well as facilitators and barriers to those preferred practices (Castillo et al., 2016; see also Atkinson et al., 2014; Graves et al., 2014; Hicks et al., 2014; Newman et al., 2018).

However, only a handful of studies have explored regional or state-specific practices of school psychologists (Bahr et al., 2017; DeSimone, 1998; Gilman & Gabriel, 2004; Hosp & Reschly, 2002; Sheltraw, 2013). In particular, Hosp and Reschly (2002) found significant variations by United States census regions in school psychological practices with lower salaries, higher ratios, and more traditional role functions in the East South Central (ESC) and South Atlantic regions than in other census regions. No study to date has examined school psychological practices at the state level for the ESC census division. Thus, this study aims to extend the research of Hosp and Reschly (2002) as implicated by their findings and fill a relevant gap in the literature.

The main purpose of this study is to explore the current roles and practices of school psychologists working in the ESC census division of the United States. Specifically, this study will examine and compare school psychologists' practices in each of the four states in the ESC division (e.g., Alabama, Kentucky, Mississippi, and Tennessee) as well as their alignment to the NASP Practice Model (NASP, 2020c).

Significance of the Problem / Rationale of the Study

School psychological services in the ESC census division have been previously identified as lagging in its progression towards more comprehensive service delivery as promoted by NASP (2010). Furthermore, the ESC census division has the highest percentage of rural populations compared to any other census division (U.S. Census Bureau, 2012). Curtis et al. (2002) found that school psychologists working in rural districts or districts with higher student-to-psychologist ratios reported greater involvement in services focused on special education activities, such as administering assessments, writing reports, and conducting meetings as part of psychoeducational evaluations. Rural areas are also widely recognized as having limited access to healthcare in general, especially mental health care resources (Mohatt et al., 2005). Therefore, school-based mental health services are even more critical in rural areas where resources are scarce. Given school psychologists' unique skillset and position in schools, an examination of school psychological practices and roles within the ESC division in comparison to a comprehensive service delivery model can help inform state and district policy and legislation to promote more comprehensive, integrated school psychological services beyond special education activities through grants or other funding initiatives as well as improved training and recruitment programs. In addition, findings may lead to identifying facilitators and barriers of comprehensive school psychological services specific to each state.

Research Questions

In order to examine the practices of school psychologists in the ESC division of the United States this study will be guided by the following research questions:

1. To what extent are school psychologists in the ESC division engaging in a comprehensive service delivery model as measured by the amount of time engaged in a broad range of commonly cited school psychological practices?
2. Which school psychological practices and domains of a comprehensive service delivery model do school psychologists in the ESC perceive as most needed in their current setting?
3. What differences exist between school psychologists' actual practice and services and their perceptions of needed practices and services?
4. What factors affect the discrepancies between school psychologists' actual practice and services and their perceptions of needed practices and services?
 - a. Does geographical setting affect the differences between actual school psychological practice/service and perceptions of needed school psychological practices/services?
 - b. Do school psychologists practicing in rural settings perceive certain practices and service domains as more needed than others compared to school psychologists practicing in urban or suburban settings?

Assumptions of the Study

It was assumed that participants would answer survey items honestly and accurately. Survey answers remained confidential and no identifying information was collected from participants to ensure anonymity and promote honest answers. It was assumed that the instrument used was a valid and reliable instrument to measure the variables and constructs that were studied.

Limitations of the Study

The sample was collected from a specific census division of the United States (i.e., ESC) and may not be generalizable to other populations. The study might also have been limited by methodology that relies on self-report through a survey. In addition, the data that were collected may not have represented typical school psychology practice among respondents as educational practices, including school psychology, have deviated from the norm since the current global health crisis caused by the COVID-19 pandemic began in March 2020 in the United States.

Definition of Key Terms

For the purposes of this study, the following terms are defined:

504 plan: This term refers to the legal plan extended to students with disabilities under Section 504 of the Rehabilitation Act (1973), a civil rights law which ensures them equal opportunities to receive a free and appropriate public education without discrimination (Skalski & Stanek, 2010).

Ecological systems: This refers to Bronfenbrenner's ecological systems theory (1977, 1979, 1986, 1994) which posits that an individual's social, emotional, and behavioral development cannot be understood without understanding the environment in which it takes place (Rosa & Tudge, 2013). Development is considered to be the result of ongoing, reciprocal and dynamic interactions between an individual and all facets of his or her natural environment and the dynamic interactions between the multiple concentric systems of the person's environment over a substantial length of time (Bronfenbrenner, 1994; Shaffer, 2009). Ecological systems include microsystems, which involves the biological and psychological experiences of a person in his or her immediate environments (e.g., school, work, family), as well as mesosystems involve the interactions between microsystems (e.g., relationship between home and school).

Exosystems and macrosystems are more indirectly influential on development as an individual is not an active participant in an exosystem (e.g., parent's workplace, family peers, and school board), and macrosystems involve cultural consistencies such as belief or value systems (Bronfenbrenner, 1977, 1979, 1994). The fifth subsystem, the chronosystem, involves changes over time in either the individual or the ecological systems (e.g., life transitions) that affect the course of development (Bronfenbrenner, 1986, 1994; Shaffer, 2009). School psychologists employ ecological systems theory into their daily practice, for instance, when they consider internal factors such as mood or thoughts in analyzing observable behavior.

Mental health: Mental health is defined as a person's "emotional, psychological, and social well-being" (Centers for Disease Control and Prevention, 2020, "Mental Health").

Mental health disorder: This term refers to a set of symptoms which are comprised of abnormal thoughts, emotions, behaviors, or relationships with others and results in distress or disfunction in one or more major area of life (American Psychiatric Association, 2013; World Health Organization, 2020).

Individuals with Disabilities Education Improvement Act (IDEA): This term refers to the United States federal law which entitles children with disabilities the right to a free and appropriate public education.

Special education evaluation/eligibility determination: This term refers to the assessments and practices related to conducting evaluations to determine whether a child has a disability under IDEA and meets state-specific criteria for receiving special education services through a public school system. The term *psychoeducational evaluation* is used interchangeably with special education evaluation in this study.

Individualized education program (IEP): This term refers to the legally binding document that outlines a specific educational plan for a student who has a disability under IDEA and is eligible to receive special education services which is developed by a multidisciplinary team of school personnel and parents (IDEA, 2004).

Multi-tiered systems of support (MTSS): This term refers to a schoolwide service-delivery framework in which academic, behavioral, and social-emotional supports are provided to students with a preventive focus using data to inform students' needs (Newman et al., 2019).

Response to intervention (RTI): This term refers to a multi-tiered approach to identifying and intervening with students who have academic and behavioral needs by utilizing scientifically-based instruction and interventions, ongoing student assessment, and parental involvement (National Center for Learning Disabilities, n.d.).

Positive behavior intervention and supports (PBIS): This term refers to a three-tiered framework of supporting students' behavioral needs by integrating research-based preventive practices in classrooms and schools to increase positive behaviors and pro-social relationships and skills (Center on PBIS, 2019).

Psychoeducational evaluation: This term refers to the assessments and practices related to conducting psychological and educational evaluations to determine whether a child has a disability under IDEA and meets state-specific criteria for receiving special education services through a public school system. The term *special education evaluation* is used interchangeably with psychoeducational evaluation in this study.

Social-emotional learning (SEL): This is the process through which humans come to “understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions”

(Collaborative for Academic, Social, and Emotional Learning [CASEL], 2020, “What is SEL?” section).

School-based mental health (SBMH): This refers to services and practices that support children’s mental health needs and are delivered in a school setting (Kutash et al., 2006).

Summary

This chapter addresses the growing need for school-based mental health services as well as the purpose of the proposed study, rationale of the study, research questions, and potential limitations. Chapter 2 provides a review of the literature pertaining to the roles and practices of school psychologists. Chapter 3 provides the methodology of the study, participants, instrumentation, and procedures. Chapter 4 provides an overview of the data results from the study. Chapter 5 presents a discussion of the data, recommendations and implications for practice as well as possible future research.

CHAPTER II
REVIEW OF RELATED LITERATURE

Introduction

Educational policies and mandates are constantly evolving; and, such changes influence the roles of school-based mental health professionals such as school psychologists. Variation in school psychologists' roles have plagued the field since its inception in the mid-20th century. These discrepancies have since been the topic of numerous research studies and strategic plans for the field at the national level. School psychologists' roles, specifically actual practices and their alignment to the current national model, will be explored in this study. This chapter summarizes the review of literature related to this study.

Overview of School Psychology

History of the Field

School psychology officially emerged as a field in 1954 when the American Psychological Association (APA) hosted the first national school psychology conference (Fagan, 2005). Since the early years, the field has been divided into three generations. The first generation of school psychologists primarily served as gatekeepers to special education services by administering intelligence and achievement tests to children (Tharinger et al., 2008). The second generation coincided with the first federal legislation that mandated a free public education for children with special needs, Education for All Handicapped Children Act of 1975 (EAHCA). The EAHCA required that all children with special needs be given the most appropriate education through an individualized education program (IEP) in the environment that

has the least restrictions (Rebore, 1980). School psychologists' role in assessing and identifying children with special needs remained the main focus of the field (Tharinger et al., 2008). The current and third generation of school psychology emerged around the new millennium when The Future of School Psychology Conference was held in 2002.

The Future of School Psychology Conference in 2002 helped shift the focus of school psychological services toward a more comprehensive model to support *all* students rather than solely special education populations. The conference also called for expanded roles beyond assessment such as engagement in early intervention and prevention services as well as systems-wide services. The conference also stressed the importance of using evidenced-based practices in school psychology and then measuring the effectiveness of such practices with each individual case (Harrison et al., 2004).

National Association of School Psychologists (NASP) Practice Model

The National Association of School Psychologists (NASP) first issued its model of comprehensive and integrated services in 1978 and has since issued six revisions (NASP, 2020c) in an effort to guide and unify expanding role definitions. The current and seventh iteration of the national model (NASP, 2020c) has two major parts. The first part outlines 10 professional practice domains of school psychology which reflect a basic level of competency for practitioners while the second part highlights organizational principles which are intended to guide employing school districts and organizations to ensure effective school psychological service delivery.

Professional Practices

Practices That Permeate All Aspects of Service Delivery. The NASP Practice Model (2020c) highlights two major domains that comprise every aspect of school psychological

services. The first domain is data-based decision making and accountability. School psychologists operate under a scientist-practitioner model and are trained in both data analysis and problem-solving (Edwards, 1987). In a traditional sense, school psychologists employ data-based decision making in their diagnostic roles as evaluators for special education eligibility. In addition, they utilize data-based problem solving to select, monitor, and evaluate both academic and social-emotional interventions within multi-tiered support systems [MTSS] (NASP, 2020c; Fagan, 2002). The second permeating practice of school psychologists which is Domain 2 of the NASP Practice Model is consultation and collaboration. Consultative and collaborative practices infiltrate school psychologists' communication with a range of populations including teachers, administrators, parents, community providers, and other stakeholders in education (NASP, 2020c).

Direct and Indirect Services. The next area of school psychological service delivery is direct and indirect services for children, families, and schools (NASP, 2020c). These are achieved at both a micro-level with students and at a macro-level, systemically.

Student-Level. At the student level, school psychologists are expected to deliver both indirect and direct services that support interventions and instructional support for the development of academic skills (Domain 3). For example, school psychologists provide recommendations of research-based instructional strategies tailored to individual student or classroom needs. They may also provide evaluative feedback on fidelity and implementation of academic interventions. School psychologists also are experts in the area of mental health services and interventions to foster social, emotional, behavioral, and life skills (Domain 4). For instance, school psychologists may provide direct services through conducting functional behavior assessments (FBA) or individual or group counseling services to students. Indirectly,

school psychologists may consult with classroom teachers, administrators, and other school-based mental health providers regarding school or class-wide behavior management strategies, social skills instruction, or parent education.

Systems-Level. At a systems-level, school psychologists promote school- and systems-wide practices (Domain 5) to foster academic and socio-emotional learning such as helping design positive behavior intervention supports (PBIS), selecting and interpreting universal screening and progress-monitoring data collection methods, and developing or delivering staff training (NASP, 2020c). School psychologists also provide expertise in the area of preventive and responsive services (Domain 6) such as school-wide initiatives to reduce bullying, prevent suicide, provide mental health first aid or triage in response to crises, or promote wellness programs in schools. In addition, school psychologists possess skills and knowledge to enhance school and family collaboration (Domain 7). For instance, school psychologists apply theory and research related to family and ecological systems, assist in coordination of services across providers, and consider diverse cultural factors and issues that influence student outcomes (NASP, 2020c).

Foundations of Service Delivery. The NASP Practice Model (2020c) identifies three foundational pillars that undergird school psychological service delivery. The first pillar is school psychologists' understanding of diversity in development and learning (Domain 8). With training in child development, language acquisition, disabilities, trauma, multiculturalism, and ecological systems theory, school psychologists are equipped with a foundation of knowledge of the different factors that may impact student learning and outcomes. The second pillar that supports school psychology practice is research and program evaluation (Domain 9). School psychologists are skilled in procuring, analyzing, applying, and conducting research related to

psychology and education. Data collection, analysis, and interpretation are at the heart of school psychologists' scientist-practitioner model. The final foundational pillar of school psychologists' practice, which constitutes Domain 10 of the NASP Practice Model, is their knowledge of and commitment to legal, ethical, and professional standards (NASP, 2020c).

Organizational Principles

The second part of the NASP model addresses six organizational factors which support effective service delivery of school psychologists. First, NASP identifies that school psychological services must be provided in a comprehensive, organized manner along a spectrum of integrated services that are made available to all students and driven by need. Second, school psychological services are most effective when delivered in climates that uphold mutual respect and employee care. Next, school systems with comprehensive school psychological service delivery provide satisfactory physical, personnel, and fiscal systems to support school psychologists including adequate work space, technology, and materials, recruitment and retention to meet optimal school psychologist to student ratios (e.g., 1:500-700), and personnel and professional development benefits (NASP, 2020c). The fourth organizational principle identified in the NASP Practice Model is positive and proactive professional communication among employees at all organizational levels. NASP also highlighted that appropriate supervision and mentoring should be available to effectuate effective school psychological service delivery. Lastly, organizations employing school psychologists should ensure ongoing professional development opportunities for their personnel.

School Psychologists' Training and Credentialing

School Psychology Graduate Training Programs

As with many aspects of school psychology, NASP (2020b) has issued standards for school psychology graduate training programs. A set of five program standards guide graduate education for school psychology training programs which include standards for the context and structure of programs, content knowledge offered through course work, supervision in field experiences, performance-based program evaluation and accountability, and support and resources from the program. Structural components include offering a sequential program of study clearly labeled as a school psychology program, specific faculty-to-student ratios (e.g., 1:12 or less), and certain requirements on credentials of faculty members (e.g., minimum number of faculty holding doctoral degrees in school psychology). Criteria are also set for two degree tracks in school psychology: specialist-level and doctoral-level programs. Specialist-level programs require a minimum of three years of full-time study comprised of a minimum of 60 graduate semester hours and a 1,200-hour supervised internship with half of the hours in a school setting to be completed within one academic year or two academic years, if completed on a part-time basis. Doctoral-level programs require more in-depth training and competencies with a minimum of four years of full-time study comprised of at least 90 graduate semester hours and a 1,500-hour supervised internship.

Coursework

School psychology graduate training programs offer coursework that reflect the 10 domains of school psychological practice (NASP, 2020c). Graduate training programs emphasize coursework in both psychology and education. Content areas such as the following are required: theories of learning; histories and systems of psychology; biological, cognitive, and social

aspects of behavior; psychological measurement and assessment; research design and methodology; human growth and development; psychopathology; professional standards and ethics; effective interventions; theories and methods of assessment and diagnosis; consultation; school-wide practices to promote learning; family school collaboration; individual differences in behavior; theories of counseling; crisis intervention; program evaluation; issues of cultural and individual diversity (Prus & Strein, 2011).

Field Experiences

Alongside coursework, supervised field experiences are a key component to school psychology training. As part of the year-long internship, school psychology interns are required to obtain a minimum number of face-to-face weekly supervision hours with their internship supervisor, who must hold the appropriate credential for the state in which they are practicing and at least three years' experience in the field. School psychology internships also require students to demonstrate professional competencies through activities or assignments in a minimum of three comprehensive areas: data-based decision making through psychoeducational assessments; development, implementation and evaluation of interventions addressing cognitive and academic needs; and development, implementation and evaluation of interventions addressing social-emotional or behavioral needs (NASP, 2020b). Prior to internship, school psychology graduate trainees typically complete practicum field experiences to hone other related professional skill areas.

National School Psychology Certification System

Approximately a decade after NASP introduced its first national Practical Model, a national certification system was developed and introduced for school psychology (NASP, 2020b). The national certification system was in response to federal legislation regarding the

credentials of professionals working in school settings. The U.S. Department of Education had mandated that professionals working in schools, such as speech-language pathologists, were to hold the highest credential issued by a state in their field which NASP lobbied to have specified to the highest credential issued by a state department of education. In response to NASP's petition, the U.S. Department of Education requested information on national credentialing standards for school psychologists. At the time, no unitary national credentialing system existed. In fact, across varying states, over 15 sets of standards were being used to credential school psychologists practicing in schools. The need for a consistent, national set of credentialing standards for the field was recognized and the first plan for a national certification system was issued in 1988.

Currently, in order to obtain the National Certified School Psychologist (NCSP) credential, applicants must complete graduate coursework from a specialist-level program of study, (i.e., specifically labeled as a program of school psychology) (NASP, 2010b). While institutions may award different degrees (e.g., Educational Specialist [Ed.S.], Master's Plus, Psychology Specialist [PsyS]) for completion of their programs of study, in order to meet criteria for the NCSP credential, a specialist-level program is one which includes a minimum of 60 graduate credit hours with 54 of those hours being achieved through coursework. In addition to graduate coursework, NCSPs have completed a series of practicum requirements during their graduate course of study prior to completing a minimum 1,200-hour supervised internship, with at least 600 of those hours being completed in a school setting. Finally, NCSP applicants must obtain specific score requirements on the Praxis test specifically identified for School Psychology.

The NCSP credential expires after 36 months of issuance with renewal requirements including a minimum of 75 continuing professional development hours obtained across a range of activities. Within the minimum renewal activities are further requirements including three hours of legal or ethical professional development and 10 hours of continuing professional development from a NASP- or APA-approved provider.

School Psychologists' Professional Practices

Numerous studies have examined the actual roles and functions of school psychologists, as well as the demographic variables of practitioners over the years, including the NASP membership survey, which has been conducted every five years over the past 30 years (McNamara, et al., 2019). An overview of recurring demographic variables and a more in-depth review of school psychological professional practice areas will be provided subsequently.

Demographic Variables

According to the results from the 2015 NASP Membership Survey (Walcott & Hyson, 2018), the majority of school psychologists are white (88.2%), middle-aged ($\bar{x}=42.4$), and female (83.7%) which in comparison to previous years' studies indicates a continual steady increase in racial diversity as well as female dominance in the field. The average years of experience reported in the field was 12 years with responses ranging from first-year practitioners to 48 years. The majority of school psychologists (54.9%) hold a specialist degree (or equivalent to a specialist degree) and work as a school-based school psychologist (82.9%), while the remaining respondents work in various settings (e.g., university faculty, school administrator, state department of education, other). A quarter of NASP members hold a doctorate degree (25.2%). The majority of school psychologists are certified or licensed through their state education agency (96%), and Walcott and Hyson (2018) reported an increase in reports of respondents also

holding the NCSP (67%) from previous years. Reported salaries vary significantly by geographic region with the Northeast and West regions reporting higher salaries than the other regions in the contiguous United States. The median salary for school-based practitioners is reported as \$63,000 (Walcott & Hyson, 2018).

Results from the NASP National Membership Survey are largely generalizable to school psychologists who are not members of NASP, as indicated by Lewis et al. (2008). However, a few differences were noted including a more ethnically diverse population of school psychologists among non-NASP members, fewer non-NASP practitioners possessing the NCSP credential than NASP members, and differences in discrete practices (e.g., use of curriculum based measurements). Lewis et al.'s (2008) findings support the generalization of NASP membership surveys to school psychology as a whole. However, Lewis et al. raised questions regarding potential discrepancies in specific practices of school psychologists as well as discrepancies in adherence to the NASP practice model.

Practice Areas

School psychologists have reported disparities between their preferred or desired roles and actual practices as early as the late 1960s (Magary, 1967; Roberts, 1970; Silverman, 1969). Concern regarding divergent role functions across the field led to NASP's publication of its first iteration of a national model of school psychological services (Meacham & Peckham, 1978; NASP, 1978). A review of the literature indicates four school psychological practice areas reflective of comprehensive, integrated services: assessment, consultation, counseling, and intervention.

Assessment

Traditional assessment practices are central to the origins of school psychology and have remained central to school psychologists' practices into the 21st century. In 1971, Farling and Hoedt surveyed a national sample of school psychologists and found that the majority of school psychologists (72%) functioned primarily in the traditional role of psychoeducational evaluator, yet less than one-half of the surveyed school psychologists (48%) idealized assessment as a primary role. Farling and Hoedt's (1971) study also found that, unsurprisingly, assessment related activities were the most time-consuming activities reported by school psychologists at that time. Several years later and coinciding with NASP's issuance of its first national guidelines on school psychological practice, Meacham and Peckham (1978) found assessment as the primary role function of school psychologists. However, they also found the emerging trend toward consultation as being the preferred primary function among practitioners which continued into the late 20th century.

As a whole, the majority of 21st-century school psychologists continue to spend most of their time engaged in assessment practices related to special education services (Benson et al., 2019; Lewis et al., 2008; McNamara et al., 2019; Sotelo-Dynega & Dixon, 2014; Stoiber & Vanderwood, 2008), but variations exist in the *amount* of time school psychologists spend in assessment practices based upon certain variables. For example, the geographic location of school psychologists influences the amount of time they spend in assessment practices. As a whole, school psychologists spend most of their time in activities related to special education eligibility evaluations, but school psychologists in the ESC census division spend the most time engaged in those activities (Hosp & Reschly, 2002). In contrast, the practitioners in the North East and Mid-Atlantic divisions spend the least time in special education evaluations (Hosp &

Reschly, 2002). Also, school psychologists practicing in more rural areas have been associated with greater special education evaluation (Curtis et al., 2002) and assessment related activities compared to those practicing in urban settings (Stoiber & Vanderwood, 2008).

One study yielded conflicting results to the overall consensus that assessment practices consume the majority of school psychologists' time. Bahr et al. (2017) conducted a state-level comparison of school psychologists' practices among practitioners in three Mid-Western states with different policies and laws governing general education services and special education identification. School psychologists practicing in Iowa spent more time in problem-solving consultation than diagnostic assessment practices and practitioners. Practitioners in both Iowa and Illinois spent more time on problem-solving consultation and school-based intervention teams than school psychologists in Missouri. Bahr et al. (2017) theorized that Iowa school psychologists engaged in more consultative practices than Missouri practitioners due to differences in each state's education law. For example, in Iowa, special education eligibility identification is not reliant on categorical disabilities. In addition, Iowa implemented MTSS initiatives and requires progress-monitoring for all students (Bahr et al., 2017).

Consultation

Meacham and Peckham (1978) identified the consultative role as trending in school psychological practice. Consultation has persisted as the primary preferred role of school psychologists and while the gap has narrowed, discrepancy between preferred and actual practice in this area remains (Newman et al., 2018). McNamara et al. (2019) found that NASP members reported consultation and collaboration specific to instructional supports as the second most-engaged activity behind activities related to special education evaluation. Other studies consistently indicated that consultation is the most valued or preferred practice area over more

traditional school psychological services [e.g., assessment] (Bahr et al., 2017; Filter et al., 2013; Stoiber & Vanderwood, 2008). The findings of Farrell et al. (2005) and Watkins et al. (2001) supported the expansion of school psychological consultative services as teachers reported school psychologists' consultation services as both valuable and desired.

Newman et al. (2018) speculated that the limited applications of consultative models reported by early career school psychologists in their study may be related to alternative forms of consultative models eclipsing other models of consultation. For example, they reasoned that team-based and systems-level consultative practices such as those utilized in implementation of a MTSS framework may be replacing more traditional models of consultation and there may be competing conceptualizations of consultation. Other studies have suggested that discrepancies in consultative roles may be attributed to lack of adequate graduate training in consultation (Klose et al., 2012).

Counseling

Another practice area prevalent in the research is counseling services. School psychologists spend around a tenth of their time providing direct counseling services to students (e.g., group, individual) and is a preferred role that school psychologists wish to expand (Agresta, 2004; Hanchon & Fernald, 2013; Suldo et al., 2010). Eklund et al. (2017) reported counseling as the main SBMH service delivered by school psychologists with individual counseling comprising 63% of their SBMH services each week while group counseling accounted for 32%.

Intervention

Benson et al. (2019) found that school psychologists spent 58% of their time engaged in special education related services in contrast to 16% of their time engaged in preventive general

education services. Prevention and intervention practices of school psychologists are core components to the national model (NASP, 2010), but are greatly underrepresented in actual practice. For example, Hicks et al. (2014) reported that 89% of surveyed school psychologists rarely or never implemented established behavioral evidence-based interventions in their daily practice which supported previously reported levels of involvement in behavioral interventions (Sullivan et al., 2011). Despite reported limited involvement in behavioral interventions, studies have indicated that the majority of school psychologists, who are employed by school districts, implement response-to-intervention (RTI) models (Sullivan & Long, 2010) or PBIS systems (Sullivan et al., 2011).

Organizational Factors Impacting School Psychologists' Practice

In order to support a comprehensive school psychology practice model, certain organizational factors must be in place (NASP, 2020c). Upon a review of the literature, several thematic organizational factors emerged as either promoting or impeding comprehensive and integrated school psychological service delivery. They include time, student-to-school psychologist ratios, and administrative support and expectations.

Time

Resources such as time appeared frequently in the literature as impacting school psychologists' ability to implement more comprehensive services delivery as opposed to traditional role functions. Multiple studies found that time constraints interfered with early career school psychologists' ability to implement desired consultative and practices related to SBMH due to conflicting demands related to assessment practices and other requirements related to special education evaluation monopolizing their time (e.g., paperwork, availability) (Castillo et al., 2016; Eklund et al., 2017; Filter, 2013; Newman et al., 2018; Splett et al., 2013). Time

constraints have been cited as the barriers to school psychologists' provision of therapeutic interventions in the United Kingdom (Atkinson, et al., 2014).

Ratios

Similarly, ratios of students to school psychologists are identified as common facilitators or barriers to preferred practice. The recommended ratio of school psychologists to students under the NASP Practice Model is 1:500-700 (NASP, 2020c), and the current national average is almost double this amount with a ratio of 1:1,381 (Walcott & Hyson, 2018). Student-to-practitioner ratios are directly linked to time as a resource as lower ratios afford more time to engage in either more comprehensive services or more manageable evaluation caseloads. In addition, school psychologists with higher ratios may be assigned to multiple schools, therefore limiting their availability to provide comprehensive services beyond that of traditional special education evaluators (Brown et al., 2006). For instance, DeSimone (1998) found a significant relationship between lower student-to-school psychologist ratios (<1:1500) and school psychologists' engagement in counseling services with higher ratios associated with more investment in assessment practices (McNamara et al., 2019). Higher ratios have also been associated with reduced availability and provision of SBMH services by school psychologists (Eklund et al., 2017). Filter et al.'s (2013) study also indicated student-to-practitioner ratios as a specific barrier to preferred practice.

Administrative Support/Expectations

Support from administration has also been regularly identified as instrumental in supporting or hindering ideal school psychological service delivery. Newman et al. (2018) identified administrative support as a critical component to consultative change. Void of administrative support, school psychologists reported resistance to change and unilateral

decision-making processes in their workplace but consultative processes and endorsement for consultative change when administrators were vocally and actively supportive of school psychological consultative services. Specifically, administrative support was identified as crucial in either limiting or facilitating school psychologists' involvement in school-based mental health service delivery (Eklund et al., 2017; Suldo et al., 2010). In addition to time-related constraints, administrative expectations were reported as barriers to preferred school psychological practice (Filter et al., 2013).

Mental Health Services in Rural Areas

According to the 2010 census results, nearly one-quarter of American's school-aged children lived in rural communities and over one-half of school districts in the United States were considered rural (Aud et al., 2013). Per the National Center for Educational Statistics (2018), rurality is categorized into three subtypes depending on the distance from an urbanized area: fringe (<5 miles), distant (>5 miles but ≤ 25 miles), and remote (>25 miles).

Rural schoolchildren experience the same if not greater rates of mental health issues as children in urban communities (Moore et al., 2005; Polaha, et al., 2011). For example, children residing in rural areas are more likely to have a parent with mental health problems (Robinson et al., 2017). Suicide rates among rural adolescents are nearly double those of their urban counterparts, a disparity that is widening over time (Fontanella et al., 2015; National Advisory Committee on Rural Health and Human Services, 2017).

Despite the increased risk and need for care, mental health services are often not available to those living in rural areas due to a number of barriers unique to the rural setting (Blackstock et al., 2018). For example, rural areas tend to be geographically vast which contributes to personnel shortages; the nearest available mental health service provider may

require a long commute for residents who often have unreliable transportation (Siceloff et al., 2017). Rural areas are also correlated with higher poverty and unemployment rates which in turn impacts the affordability of mental health care (Siceloff et al., 2017). Other commonly identified barriers to rural mental health services include stigmas or beliefs about mental health and services as well as lack of knowledge or awareness of mental health issues (Blackstock et al., 2018).

School-Based Mental Health Services

Many studies have recognized public schools as a practical vehicle for delivery mental health services to children (Loades & Mastroyannopoulou, 2010; Weist, 1997) with multiple benefits. For instance, school-based mental health services (SBMH) offers children and adolescents accessibility to and continuity of care since services are offered on-site in school buildings during school hours. In addition, given the familiarity of the school setting and school personnel, SBMH offer an added benefit of reducing stigma and increasing comfort among youth needing mental health services. Other added benefits of SBMH include extending a continuum of services from early intervention and prevention (e.g., universal mental health screening, mental health first aid) to crisis response (e.g., suicide and threat assessments) as well as integrating services in children's natural environment (Hoover & Mayworm, 2017). In addition to the cited benefits, Searcy van Vulpen et al. (2018) found that the majority of parents of school-children in rural communities perceived value in SBMH services with 78 percent ($n=471$) agreeing or strongly agreeing that schools should address students' mental health needs. More specifically,

they found that the majority of parents were in favor of SBMH services such as mental health screenings, social-emotional learning, and referring to community-based providers.

Rural SBMH Services

While SBMH services offer solutions to many of the barriers for providing mental health care to rural children, rural schools encounter other difficulties in providing adequate SBMH services. In their literature review of mental health care access for rural schoolchildren, Blackstock et al. (2018) highlighted school support as one of five main barriers cited in the research. For example, inadequate funding, personnel shortage, and staff retention were reported as major factors impeding SBMH services in rural schools (Lee et al., 2009). Among SBMH providers (e.g., such as school counselors, social workers, and school psychologists) who are available, other factors inhibit them from providing the services their students need. Bain et al. (2011) surveyed school counselors in rural Texas and found that non-counseling duties and high student-to-counselor ratios were reported as significant barriers to providing adequate SBMH services.

Rural School Psychology. Reschly and Connolly (1990) first investigated the idea of differences in school psychologists' practice based upon geographical setting and found no statistically significant differences in school psychologists' practices, roles, job satisfaction, and employment. In fact, they found that school psychologists practicing in rural settings reported greater needs in continuing education for academic and behavioral interventions among general education populations which they in turn presented as rural school psychologists taking on a more comprehensive, generalist role. Reschly and Connolly (1990) also found no differences in the amount of time school psychologists spent in special education eligibility activities regardless of their setting.

When Reschly and Connolly (1990) first explored the concept of rural school psychology, the NCSP credential was in its infancy, and since that time, the NASP Practice Model (2020c) has been revised five times. With changes in practice guidelines and credentialing, more research studies have been conducted on the practice of school psychologists working in rural schools which have painted a different picture of a rural school psychologist than what Reschly and Connolly (1990) reported 30 years ago. For instance, rural school psychologists have less professional experience compared to those working in urban or suburban settings (Curtis et al., 2002). Clopton and Knesting (2006) surveyed school psychologists working in rural counties in a particular state who reported that travel time between multiple school assignments led to feelings of frustration and isolation and reported lack of other mental health support services in their area. In addition to particular logistical factors, rural school psychologists often encounter unique legal and ethical issues such as competence, dual relationships, and confidentiality (Edwards & Sullivan, 2014; Osborn, 2012).

Most recently, Goforth et al. (2017) surveyed school psychologists working in the Rocky Mountain and Pacific Northwest regions of the United States. The researchers found that while rural school psychologists had less professional experience than urban school psychologists, they had similar years of experience and salaries as their suburban counterparts. Rural school psychologists also reported higher levels of job satisfaction than urban and suburban school psychologists. Goforth et al. (2017) found that both rural and urban school psychologists reported less access to parents and behavior specialists. Qualitatively, four themes emerged from their focus groups of rural school psychologists' perspectives on their practices. Of particular relevance to this study was the theme of professional issues. For example, lack of resources and

funding for students to receive appropriate services and difficulty obtaining and retaining qualified school psychologists were cited as major professional issues in rural schools.

Significance to Study. Although Goforth et al. (2017) found no differences between salaries of rural school psychologists and suburban school psychologists, this could be attributed to the fact that the participants were located in the Rocky Mountain and Pacific Northwest regions of the United States which are also the highest compensated geographical regions for school psychologists, according to the most recent NASP national survey (Walcott & Hyson, 2018). The same NASP survey indicated that 20% of NASP members work in rural schools (McNamara et al., 2019) and nearly 20% work in the Southeast region of the United States. According to the U.S. Census Bureau (2012), the ESC census division of the Southeast region has the highest percentage of rural populations compared to any other census division. Given the discrepancies in findings from previous studies of rural school psychologists and the rural nature of the ESC census division, a closer look at the practices and characteristics of rural school psychologists in the ESC census division is warranted as part of this study.

School Psychology Advocacy

Advocacy for the field is inherent to school psychology practice as the two rely upon one another (McDonald et al., 2014). School psychologists are trained and credentialed to provide comprehensive mental health and academic services to children and uphold professional and ethical practices in the best interest of children (NASP, 2020c). Therefore, to advocate for the field of school psychology is, in fact, to advocate for children (Rogers & O’Byron, 2008).

NASP Strategic Goals

NASP (2017) currently has five strategic goals through 2022. The first goal is to increase implementation of the NASP Practice Model (2020c). The second goal is to advance the role of

school psychologists as mental health providers. NASP aims to increase the school psychology workforce to address the national shortage. The fourth goal is to advocate for leadership roles to effect change at multiple levels. The final goal is to continue the fight for social justice for children in schools (McNamara et al., 2019).

State Level Differences

While NASP's strategic goals are broad goals for the field, certain regions and states have made and are making gains in these areas. For example, Florida is one of several states in which school psychologists are eligible to seek licensure through their state's Board of Health or Psychology in order to practice privately as a mental health provider (Raffaele Mendez, 2016) with an Educational Specialist (Ed.S.) level degree. With respect to increasing implementation of the NASP Practice Model, every state in the United States has SEL preschool standards, but only 11 out of 50 states have freestanding SEL standards for Kindergarten through 12th grade (or some combination of grade levels) (i.e., outside of those embedded in health, physical education, or counseling standards) (Eklund et al., 2018). One of these states, identified by Eklund et al. (2018), that has freestanding SEL standards for all school-aged children, is Illinois. Interestingly, Illinois is also one of the states identified in Bahr et al.'s (2017) tri-state comparison of school psychologists' practices in the Midwest. Bahr et al. (2017) found that school psychologists in Illinois spend more time on problem-solving consultation and school-based intervention teams than school psychologists in Missouri, which has no freestanding SEL standards.

Regarding addressing workforce shortages, several state agencies have conducted surveys of practitioners and other stakeholders to obtain data on factors contributing to workforce shortages in their states published their findings. For instance, the Kansas Association of School Psychologists [KASP] (2017) found that high student-to-practitioner ratios, high number of

expected retirements, frustrations with compensation, and insufficient number of graduates entering the field were contributing to the personnel shortage in school psychology. Mann et al. (2019) recently conducted a survey of school psychology training program directors and school psychologists' supervisors to explore the demand for and supply of school psychologists in Florida. They found a deficit between supply and demand for school psychologists with contributing factors similar to KASP's study (2017) such as dissatisfaction with salaries, unfilled internship opportunities, and difficulty with recruitment and retention into graduate training programs due to lack of funding for scholarships or tuition assistance. Mann et al. (2019) discussed that data from their study was being used by the Florida state association to address personnel shortages through partnerships with graduate training programs, local and state school boards, and state legislature.

Conclusion

The field of school psychology has responded to changes in climate and needs of youth and children by expanding roles, services, and practices. As the field rapidly evolved and grew, NASP issued national standards for training, certification, and ethics as well as a national Practice Model to unify the field and provide consistency (NASP, 2020c). Despite the issuance of a comprehensive model and national recognition of school psychologists' expertise as mental health professionals, school psychologists often maintain their traditional status in narrow roles as gatekeepers to special education (Merrell et al., 2006).

While some studies have shown school psychologists as operating in more comprehensive roles as set forth by NASP (2020b), role discrepancies have been shown among school psychologists practicing in different regions of the United States both geographically (e.g., Northeast, Midwest, Southeastern, Pacific Northwest, etc.) and by population density (e.g.,

urban, rural, suburban). To date, only one study has examined differences at the state level (Bahr et al., 2018) and none have examined the practices of school psychologists in the ESC census division of the United States, a division that is largely rural. Rural areas are reportedly underserved in the area of mental health needs and school-based mental health services are sometimes the main resource for rural children and adolescents.

This current study sought to fill a gap in the literature related to school psychologists' practices at the state-level. In addition, the findings from this study could be instrumental in advocating for more school-based mental health professionals, like school psychologists, in rural areas through training initiatives and other opportunities to improve rural mental health services for children.

CHAPTER III
METHODOLOGY

Introduction

Literature in the field of school psychology has documented significant variations in actual and preferred roles and practices of school psychologists with national surveys and longitudinal studies substantiating the discrepancies over the past 30 years (McNamara et al., 2019). While national survey data has helped to identify trends in the field as a whole, examination of school psychologists' practices at regional and state levels reveal more specific variations that may impact the comprehensive delivery of school psychological services in different locations and populations in the United States. For example, Hosp and Reschly (2002) found that school psychologists in the ESC and South Atlantic regions reported lower salaries, higher student-to-practitioner ratios, and more time spent in traditional assessment role functions than practitioners in other census regions. In a similar vein, school psychologists practicing in more rural areas have been associated with greater special education evaluation (Curtis et al., 2002) and assessment related activities compared to those practicing in urban settings (Stoiber & Vanderwood, 2008). To date, no study has examined school psychological practices at the state level within the same census division. Thus, this study aimed to extend the research of Hosp and Reschly (2002) as implicated by their findings and to fill a relevant gap in the literature.

The main purpose of this study was to expand the quantitative survey research of school psychologists' practices and explore the current roles and practices of school psychologists working in the ESC census division of the United States. Specifically, this study examined and

compared school psychologists' actual and perceived needed practices in each of the four states in the ESC division (e.g., Alabama, Kentucky, Mississippi, and Tennessee) with respect to the NASP Practice Model (2020c).

Research Questions

To examine and compare the actual and perceived practices among practicing school psychologists in the ESC division, the researcher posed the following research questions:

1. To what extent are school psychologists in the ESC division engaging in a comprehensive service delivery model as measured by the amount of time engaged in a broad range of commonly cited school psychological practices?
2. Which school psychological practices and domains of a comprehensive service delivery model do school psychologists in the ESC perceive as most needed in their current setting?
3. What differences exist between school psychologists' actual practice and services and their perceptions of needed practices and services?
4. What factors affect the discrepancies between school psychologists' actual practice and services and their perceptions of needed practices and services?
 - a. Does geographical setting affect the differences between actual school psychological practice/service and perceptions of needed school psychological practices/services?
 - b. Do school psychologists practicing in rural settings perceive certain practices and service domains as more needed than others compared to school psychologists practicing in urban or suburban settings?

Research Design

The current study utilized a quantitative causal-comparative survey research design. A survey research method was selected as it allows for participants to provide relevant demographic information and to report on their current practices and perceptions of what practices are needed in their current settings (Adams & Lawrence, 2019). Causal-comparative designs allow for independent variables to be categorized into different groups and then determine whether those groups differ on the dependent variable (Gall et al., 2007). For the current study, the independent variables of interest were the four states which comprise the ESC division and the community setting in which school psychologists' practice (e.g., urban, suburban, rural). These were both measured categorically.

Participants

The researcher recruited school psychologists who are currently practicing in one of the four states which comprise the ESC division of the United States as defined by the Census Bureau (i.e., Mississippi, Alabama, Tennessee, and Kentucky). According to NASP (2020), as of July 1, 2020, there were 508 active NCSPs in the ESC division (Mississippi, n=35; Alabama, n=46; Tennessee, n=262; Kentucky, n=164), which are represented in Table 1.

Table 1
NCSPs in the ESC Division

	<i>n</i>	<i>%</i>
Alabama	46	9.0
Kentucky	165	32.5
Mississippi	35	6.9
Tennessee	262	51.6
Total	508	100.0

Participants for this study were not limited to NCSPs but also included school psychologists without national certification in the field. Given Bahr et al.'s (2017) results in

which two-thirds of participants did not hold the NCSP and that NASP's active NCSP directory includes faculty members and professionals who are not employed full-time in a school setting, inclusion of school psychologists without the NCSP was warranted.

Procedures

Participants were recruited to this study via convenience sampling. The researcher distributed recruitment emails (see Appendix A) and social media recruitment posts on Facebook (see Appendix B) targeting school psychologists practicing in the ESC division. The emails and posts contained the link to a 15-20 minute online survey, which was hosted by Qualtrics. Publicly available email addresses were obtained from websites of school districts in the ESC division, and permission was obtained from the administrators of a Facebook school psychology group to recruit participants by posting to the group page. Preliminary recruitment emails were sent to each state's association of school psychologists for permission to distribute the survey to their members, but permission was not obtained.

Institutional Review Board (IRB) approval for the study was obtained from the University of Alabama's IRB on November 10, 2020 (see Appendix C). Recruitment emails and initial social media recruitment posts were distributed on November 13, 2020. Additional follow-up recruitment posts were distributed on Facebook on November 15, 2020, and again on January 14, 2021. The link to the online survey was open for responses until January 19, 2021. Participants were offered a chance to enter a drawing for one of four \$25.00 gift cards by clicking a link at the end of the survey which redirected them to a separate Qualtrics survey where they could enter their name and email address to enter the drawing. After the online survey had closed, winners were selected using an online random number generator and were sent electronic gift cards to the email addresses they provided.

This study aimed to recruit a sample of at least 250 school psychologists who were practicing full-time in a school setting (Mississippi, n=18; Alabama, n=25; Tennessee, n=125; Kentucky, n=82). Sample size was calculated using G*Power. Based on power of .95, .05 significance, and .5 effect size, a sample size of 54 participants was needed for paired samples *t*-test analyses. Based on power of .95 with four predictors, .05 significance, and a .6 effect size, a sample size of 52 participants were needed for ANOVA analyses. It was anticipated that at least 87 of those recruited would participate in the study. A total of 94 participants were recruited for the study. However, only 65 of participants answered the survey in its entirety. This achieved sample size ($N = 65$) satisfied the requirements for the statistical analyses.

Table 2
Frequency and Percentage of Participants in the ESC Division

	<i>n</i>	%
Alabama	14	21.5
Kentucky	19	29.2
Tennessee	31	47.7
Mississippi	1	1.5

Note. $N = 65$.

Instrumentation

Participants completed an online survey consisting of 25 items measuring different demographic variables and 16 items measuring school psychologists' actual and needed practices and were adapted from the NASP Membership Survey (Walcott & Hyson, 2018). The survey took about 15 to 20 minutes to complete.

Demographic Questionnaire

The demographic portion of the survey consisted of 25 items was administered to participants. Items 1 – 4 addressed gender, age, and race/ethnicity. Items 5 – 11 asked about years of experience, primary job title, job function, job location, and compensation. Items 12 – 16 asked about participants' graduate training, degree, and credentials. Item 17 was used to

identify participants working full time in a school setting. Items 18 – 23 addressed workplace characteristics such as geographical setting (e.g., urban, rural, suburban), number of contract days, number of schools served, student population, and number of school psychologists in the district. Item 24 asked about proximity of a school psychology training program to the participants' current workplace, and Item 25 asked about implementation of specific statewide practices or initiatives.

NASP Membership Survey

Over the past 30 years, NASP has conducted a national survey of its members once every five-year cycle using the NASP Membership Survey (NASP, 2015; Walcott & Hyson, 2018). The most recent version, the 2015 NASP Membership Survey, contained 41-items and is divided into two main parts. The first section is intended for all participants and is comprised mostly of demographic items while the second section targets only participants who are employed full-time in a school setting. The survey was developed by a team of members from the NASP Research Committee who analyzed each survey item from previous years' versions of the survey. The only major changes to the 2015 survey from previous versions were changing two questions which addressed specific work activities to activities that directly represented the 10 domains from the NASP Practice Model (Walcott & Hyson, 2018; NASP, 2010).

The NASP Membership Survey (Walcott & Hyson, 2018) was adapted and reproduced for this study with approval from the NASP Director of Research and the Chair of the NASP Research Committee granted on September 15, 2020 (see Appendix D). Whereas the NASP Membership Survey (Walcott & Hyson, 2018) asked participants to answer questions based upon a specific school year (e.g., 2014-2015), Items 34 – 37 of the NASP Membership Survey were rephrased and asked participants to answer based upon the most recently completed school year.

Items 32 and 33 were also revised; phrasing was changed to ask participants to answer based upon their experiences during a typical school year and was changed from a constructed open-ended response to categories of number ranges. Items 38 and 39 were rephrased for participants to answer based upon their professional experiences as a school psychologist during a typical school year with wording changed from “to what degree do you engage in each of the following activities” (Walcott & Hyson, 2018) to “how much of your time do you engage in each of the following activities.” The response options for these two questions remained as Likert-scale options but were increased from five points to seven points (e.g., *never/not at all* to *always/all the time*) to increase reliability (Thorndike & Thorndike-Christ, 2010). In addition, Items 38 and 39 were rephrased and presented as additional questions to measure participants’ perceptions of how much of their time would be needed in each of the activities listed to best serve the students in their schools.

Finally, additional questions were developed asking participants to indicate how much of their practice is spent in a number of different commonly identified school psychological activities during a typical school year and rephrased to then measure participants’ perceptions of how much of their practice they perceive is necessary to best serve the students in their school(s). Response choices were presented using the same 7-point Likert scale with accompanying percentage ranges as described above. A copy of adapted survey used for this study is available in Appendix E.

Data Analysis and Statistical Procedures

All statistical analyses used in the study were conducted using the Statistical Package for the Social Sciences (SPSS) software version 26. Descriptive statistics were obtained on demographic variables as well as the reported practices of school psychologists, for Research

Questions 1 and 2. Wilcoxon signed-rank tests (i.e., nonparametric paired samples *t*-tests) were used to analyze the relationship between participants' actual practices and perceptions of needed practices with regard to Research Question 3. Finally, nonparametric analysis of variance (ANOVA) tests (i.e., Kruskal-Wallis tests) were conducted to answer Research Question 4.

Assumptions

It was assumed that participants would provide honest and accurate responses. Survey answers remained confidential and no identifying information was collected from the participants to ensure anonymity and promote honest answers. It was also assumed that the instrument being used was a valid and reliable instrument to measure the variables and constructs being studied.

Summary

This chapter provided information about the design, participants, instrumentation, procedures, and data analysis utilized by the researcher to answer the research questions. Chapter 4 provides details regarding the results of the study.

CHAPTER IV

RESULTS

Introduction

This study's primary goal was to fill a gap in the literature by examining the roles and practices of school psychologists working in the East South Central division of the United States. More specifically, this study aimed to compare the practices of these school psychologists to the National Model (NASP, 2020c) and determine what discrepancies, if any, existed between their reported actual and perceived ideal practices. Furthermore, this study aimed to identify what factors influenced any reported discrepancies between actual and ideal practices, such as geographical setting.

The study adapted and reproduced the NASP Membership Survey (Walcott & Hyson, 2018) with permission from the authors. The survey was disseminated electronically via email and social media to school psychologists practicing in the ESC division.

To examine and compare the actual and perceived ideal practices among practicing school psychologists in the ESC division, the researcher posed the following research questions:

1. To what extent are school psychologists in the ESC division engaging in a comprehensive service delivery model as measured by the amount of time engaged in a broad range of commonly cited school psychological practices?
2. Which school psychological practices and domains of a comprehensive service delivery model do school psychologists in the ESC perceive as most needed in their current setting?

3. What differences exist between school psychologists' actual practice and services and their perceptions of needed practices and services?
4. What factors affect the discrepancies between school psychologists' actual practice and services and their perceptions of needed practices and services?
 - a. Does geographical setting affect the differences between actual school psychological practice/service and perceptions of needed school psychological practices/services?
 - b. Do school psychologists practicing in rural settings perceive certain practices and service domains as more needed than others compared to school psychologists practicing in urban or suburban settings?

Demographic Variables

Descriptive statistics were calculated for the demographic variables measured by the first 25 items of the survey. A total of 88 surveys were recorded; however, eight surveys were excluded based upon the participants' response to Item 18 which asked if the participants' full-time employment for the 2019-2020 school year was in a school setting. Out of the remaining surveys, 65 surveys were fully completed, thus rendering a sample size of 65 ($n = 65$) for this study. All statistical analyses were conducted using the Statistical Package for the Social Sciences (SPSS) version 26.

The count of participants was not normally distributed across the four states which comprise the ESC. Only one participant reported being employed in Mississippi which constituted 7.6% of the sample. Participants from Alabama represented about one-fifth of the sample ($n = 14$; 21.5%), while participants from Kentucky ($n = 19$; 29.2%) and Tennessee ($n = 31$; 47.7%) made up the majority of participants (see Table 2).

As shown in Table 3, the overwhelming majority of participants in this study identified as white (98.5%; n = 64) females (96.9%; n = 63) while only two participants from Kentucky reported as male (3.1%). One participant from Tennessee reported as black/African American (3.2%; n = 1) and another Tennessean participant reported as Hispanic (3.2%; n = 1). The majority of participants were 25 to 34 years old (53.8%; n = 35) with about one-fourth of participants being 35 to 44 years old (26.2%; n = 17). About one-half the participants reported zero to five years of experience as a school psychologist (50.8%; n = 33) with about reporting six to 10 years of experience (24.6%; n = 16). The majority of participants reported their current job title as school psychologist (89.2%; n = 58) with a small percentage reporting a different title such as psychometrist (6.2%; n = 4), university faculty (1.5%; n = 1), intern (1.5%; n = 1), or other (1.5%; n = 1) [evaluator]. The majority of participants reported a salary within the \$50,000 to \$74,999 range (72.3%; n = 47) and being paid on a teacher's salary schedule (67.7%; n = 44).

About one-half of participants reported holding the NCSP credential (52.3%; n = 34), and nearly one-fourth of participants (23.1%, n = 15) reported that school psychologists in their district receive a stipend for holding the national certification. The majority of participants reported the specialist level (Ed.S.) degree as their highest degree in school psychology (80%; n = 52), with fewer holding the doctoral degree (13.8%; n = 9), and a smaller percentage holding a master's degree (6.2%; n = 4). Participants reported some variation in the state where they completed their internships. Overall, the majority of participants from Kentucky (89.5%; n = 17) and Tennessee (83.9%; n = 26) also completed their internships in their respective states. Alabamian participants reported a broader range of internship experience outside their state with 35.7% (n = 5) completing their internships in Alabama, 21.4% (n = 3) in North Carolina, 14.3%

(n = 2) each in Pennsylvania and Tennessee, and 14.2% (n = 2) in various other states (e.g., Florida and Georgia).

Table 3
Frequency and Percentage of Responses for Demographic Variables

	ESC Division (Full Sample)		Alabama		Kentucky		Mississippi		Tennessee	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Gender										
Female	63	96.9	14	100	17	89.5	1	100	31	100
Male	2	3.1	0	0	2	10.5	0	0	0	0
Age										
25 – 34	35	53.8	7	50	10	52.6	1	100	17	54.8
35 – 44	17	26.2	4	28.6	6	31.6	0	0	7	22.6
45 – 54	8	12.3	3	21.4	2	10.5	0	0	3	9.7
55 – 64	4	6.2	0	0	1	5.3	0	0	3	9.7
65 – 74	1	1.5	0	0	0	0	0	0	1	3.2
Race										
White	64	98.5	14	100	19	100	1	100	30	96.8
Black/African American	1	1.5	0	0	0	0	0	0	1	3.2
Hispanic ^a	1	1.5	0	0	0	0	0	0	1	3.2
Experience										
0 – 5 years	33	50.8	5	35.7	10	52.6	1	100	17	54.8
6 – 10 years	16	24.6	4	28.6	4	21.1	0	0	8	25.8
11 – 15 years	3	4.6	2	14.3	1	5.3	0	0	0	0
16 – 20 years	6	9.2	3	21.4	1	5.3	0	0	2	6.5
21 – 25 years	1	1.5	0	0	1	5.3	0	0	0	0
25+ years	6	9.2	0	0	2	10.5	0	0	4	12.9
Job Title										
School Psychologist	58	89.2	12	85.7	19	100	1	100	30	96.8
Psychometrist	4	6.2	2	14.3	0	0	0	0	0	0
University faculty	1	1.5	0	0	0	0	0	0	1	3.2
Intern	1	1.5	0	0	0	0	0	0	0	0
Other	1	1.5	2	14.3	0	0	0	0	0	0
Salary										
<\$20,000	1	1.5	0	0	0	0	0	0	1	3.2
\$35,000 - \$49,999	11	16.9	0	0	2	10.5	1	100	8	25.8
\$50,000 - \$74,999	47	72.3	14	100	16	84.2	0	0	17	54.8
\$75,000 - \$99,999	6	9.2	0	0	1	5.3	0	0	5	16.1
Payscale										
Teacher	44	67.7	12	85.7	10	52.6	1	100	21	67.7
Administrative	12	18.5	0	0	7	36.8	0	0	5	16.1
Professional	5	7.7	1	7.1	0	0	0	0	4	12.9
Other	4	6.2	1	7.1	2	10.5	0	0	1	3.2

	ESC Division (Full Sample)		Alabama		Kentucky		Mississippi		Tennessee	
Stipend ^a	15	23.1	2	14.3	4	21.1	0	0	9	29.0
Degree										
Masters	4	6.2	4	28.6	0	0	0	0	0	0
Specialist	52	80.0	10	71.4	18	94.7	1	100	23	74.2
Doctorate	9	13.8	0	0	1	5.3	0	0	8	25.8
NCSP ^a	34	52.3	10	71.4	9	47.4	1	100	14	45.2
Internship										
Alabama	5	7.7	5	35.7	0	0	0	0	0	0
California	1	1.5	0	0	0	0	0	0	1	3.2
Colorado	1	1.5	0	0	0	0	0	0	1	3.2
Florida	1	1.5	1	7.1	0	0	0	0	0	0
Georgia	2	3.1	1	7.1	0	0	0	0	1	3.2
Illinois	1	1.5	0	0	1	5.3	0	0	0	0
Kentucky	17	26.2	0	0	17	89.5	0	0	0	0
Nebraska	2	3.1	0	0	0	0	0	0	2	6.5
North Carolina	3	4.6	3	21.4	0	0	0	0	0	0
Pennsylvania	2	3.1	2	14.3	0	0	0	0	0	0
South Carolina	1	1.5	0	0	0	0	1	100	0	0
Tennessee	28	43.1	2	14.3	0	0	0	0	26	83.9
Texas	1	1.5	0	0	1	5.3	0	0	0	0

^aReflects the number and percentage of participants who answered “yes” to this question.

Workplace Characteristics

Frequency statistics for the ordinal workplace characteristics variables reported by the school psychologists in this study are outlined in Table 4. Most of the school psychologists who participated in this study described the geographical location of the school they served as being rural (43.1%; n = 28) while 40% described their schools as being in a suburban setting (n = 26). Roughly 15 percent reported working in urban schools (15.4%; n = 10), and one participant described their setting at suburban/rural. The majority of school psychologists reported working under a 9- (18.5%; n = 12) or 10-month contract (60.0%; n = 39). Almost all participants reported assignments to multiple school sites for the 2019-2020 school year with 38.5% (n = 25) serving two schools, 30.8% (n = 20) serving three schools, 9.2% (n = 6) serving four schools,

and 16.9% (n = 11) serving five or more schools. Most participants reported working in a school district with a student population of 20,000 or more students (36.9%; n = 24) and 24.6% working in a district with between 10,000 to 19,999 students enrolled. About one-half of the participants reported working within a 50-mile radius of a school psychology training program (55.4%; n = 36) with the majority being in Tennessee (n = 26).

Participants provided responses regarding their school or district implementing statewide initiatives or mandates for specific systems-level practices. Most participants reported their school or district implemented practices related to RTI (81.5%; n = 53). Almost one-half of the participants reported some form of PBIS (47.7%; n = 31), while approximately one-third reported implementation of MTSS (32.3%; n = 21). Only one-fourth reported SEL practices (24.6%; n = 16). The school psychologists in this study reported that their schools had other school-based mental health professionals on staff including school counselors (96.9%; n = 63), school social workers (64.6%; n = 42), behavior specialists (60.0%; n = 39), and other professionals (21.5%; n = 14) which mainly consisted of contracted community health-providers or therapists.

Table 4
Frequency and Percentage of Responses for Workplace Characteristics

	ESC Division (Full Sample)		Alabama		Kentucky		Mississippi		Tennessee	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Community Setting										
Urban	10	15.4	1	7.1	1	5.3	0	0	8	25.8
Suburban	26	40.0	8	57.1	8	42.1	1	100	9	29.0
Rural	28	43.1	5	35.7	10	52.6	0	0	13	41.9
Other	1	1.5	0	0	0	0	0	0	1	3.2
Contract Length										
9 months	12	18.5	7	50.0	3	15.8	0	0	2	6.5
10 months	39	60.0	6	42.9	13	68.4	0	0	20	64.5
11 months	1	1.5	0	0	0	0	0	0	1	3.2
12 months	7	10.8	1	7.1	3	15.8	1	100	2	6.5
Other	6	9.2	0	0	0	0	0	0	6	19.4

	ESC Division (Full Sample)		Alabama		Kentucky		Mississippi		Tennessee	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Number of Schools Served										
1	3	4.6	0	0	0	0	0	0	3	9.7
2	25	38.5	5	35.7	7	36.8	0	0	13	41.9
3	20	30.8	2	14.3	7	36.8	0	0	11	35.5
4	6	9.2	1	7.1	3	15.8	0	0	2	6.5
5 or more	11	16.9	6	42.9	2	10.5	1	100	2	6.5
District Population										
250 - 999	1	1.5	0	0	0	0	0	0	1	3.2
1,000 – 1,999	2	3.1	0	0	0	0	0	0	2	6.5
2,000 – 4,999	11	16.9	0	0	7	36.8	0	0	4	12.9
5,000 – 9,999	11	16.9	2	14.3	5	26.3	0	0	4	12.9
10,000 – 19,999	16	24.6	8	57.1	5	26.3	0	0	3	9.7
20,000 or more	24	36.9	4	28.6	2	10.5	1	100	17	54.8
Nearby Training Program ^a	36	55.4	2	14.3	7	36.8	1	100	26	83.9
Schoolwide Practices										
PBIS ^a	31	47.7	4	28.6	17	89.5	1	100	10	32.3
SEL ^a	16	24.6	0	0	9	47.4	1	100	7	22.6
RTI ^a	53	81.5	9	64.3	15	78.9	1	100	29	93.5
MTSS ^a	21	32.3	1	7.1	8	42.1	1	100	11	35.5
Other SBMH Workers										
School counselor ^a	63	96.9	13	92.9	19	100	1	100	30	96.8
Social worker ^a	42	64.6	8	57.1	10	52.6	1	100	23	74.2
Behavior Specialist ^a	39	60.0	12	85.7	5	26.3	1	100	21	67.7
Other ^a	14	21.5	2	14.3	5	26.3	1	100	7	22.6

^aReflects the number and percentage of participants who answered “yes” to this question.

Descriptive statistics were also calculated for the ratio-level workplace variables which were measured by Items 22 – 23 and Items 32 – 34 of the survey (see Table 5). The ratio of school psychologists to students was measured by Item 22 which asked for the total number of students enrolled at the schools to which participants were assigned for the most recent typical school year. As a whole, school psychologists from the ESC division reported an average of one school psychologist for every 2,015 students ($M = 2,105$, $SD = 1,845$) with a median of one school psychologist for every 1,600 students ($Mdn = 1,600$). With the exception of Mississippi (n

= 1), the states which comprise the ESC division had roughly similar ratios when using the median as the measure of central tendency. Participants reported an average of roughly 16 full-time school psychologists employed in their districts ($M = 16, SD = 22.0$) with Tennessee having an average over twice that amount ($M = 25.8, SD = 28.2$). The median number of full-time school psychologists was 7.5 for the entire sample. Participants reported completing an average of 41 special education evaluations ($M = 41.3, SD = 30.4$), 51 reevaluations for special education eligibility ($M = 51.1, SD = 34.7$), and 134 special education meetings ($M = 134, SD = 81.7$) in a typical school year.

Table 5
Mean, Median, and Standard Deviations for Workplace Variables

	<i>n</i>	Range	<i>M</i>	<i>SD</i>	<i>Mdn</i>
Students Served	65	2 – 13,500	2,015	1,845	1,600
Alabama	14	1,200 – 7,500	2,566	1,652	1,925
Kentucky	19	700 – 13,500	2,110	2,853	1,375
Mississippi	1	0	4,996	0	4,996
Tennessee	31	2 – 3,001	1,611	767	1,600
School Psychologists in District	65	1 – 79	16.3	22.0	7.5
Alabama	14	1 – 19	7.3	4.2	7.0
Kentucky	19	2 – 40	7.8	8.6	6.0
Mississippi	1	0	8.0	--	8.0
Tennessee	31	1 – 79	25.8	28.2	12.0
Evaluations Conducted	56	0 – 150	41.3	30.4	30.0
Alabama	13	0 - 150	57.0	39.4	50.0
Kentucky	15	0 - 100	29.3	29.6	25.0
Mississippi	1	0	80.0	--	80.0
Tennessee	27	0 - 100	39.1	22.4	30.0
Reevaluations Conducted	60	0 - 150	51.1	34.7	47.5
Alabama	14	0 - 150	68.6	50.8	72.5
Kentucky	16	0 – 75	45.3	25.5	55.0
Mississippi	1	0	20.0	--	20.0
Tennessee	29	0 - 125	46.9	27.6	40.0
Special Ed. Meetings	52	0 - 375	134	81.7	125
Alabama	12	0 - 375	181	112	188

	<i>n</i>	Range	<i>M</i>	<i>SD</i>	<i>Mdn</i>
Kentucky	15	0 - 280	112	79.2	120
Mississippi	1	0	150	--	150
Tennessee	24	0 - 250	123	58.6	115

Participants were asked to report how many students or student groups they offer direct academic or behavioral/social-emotional interventions to during a typical school year. The majority of participants did not report offering these services, so frequency and percentages of school psychologists who offer specific direct and indirect services during a typical school year were reported in Table 6. Almost one-fifth of participants reported delivering academic interventions to individual students during a typical school year (18.5%; $n = 12$), and nearly a third (31.3%; $n = 20$) reported providing behavioral/social-emotional interventions to individuals. Providing group academic interventions was reported by almost one-tenth of participants (9.2%; $n = 6$), and one-fifth of participants reported providing group behavioral/social-emotional interventions (20.0%; $n = 13$). A greater percentage of school psychologists in Kentucky reported providing direct interventions in all categories than school psychologists in any other state. The majority of school psychologists in the ESC reported delivering one to four in-service programs during a typical school year (56.9%; $n = 37$), while only 15.4% ($n = 10$) reported providing the same number of parent presentations.

Research Question 1

The first question this study aimed to answer was, “To what extent are school psychologists in the ESC division engaging in a comprehensive service delivery model as measured by the amount of time engaged in a broad range of commonly cited school psychological practices?” This question was answered using descriptive statistics of responses to Items 28, 29, and 31 of the survey. Participants answered how much of their practice or how

often they engaged in a range of school psychological practices and services during a typical school year using a 7-point Likert scale (1 = *never/not at all*, 2 = *a little/rarely*, 3 = *occasionally*, 4 = *about half*, 5 = *quite a bit*, 6 = *very much/most of the time*, 7 = *almost all/always*). The school psychological practices and services were organized into the 10 NASP domains. Some items were categorized under multiple domains as certain NASP domains and practices permeate all areas of service (e.g., data-based decision making and accountability, consultation and collaboration) and overlap based upon the NASP Comprehensive Practice Model (NASP, 2020c). The items within each domain were then averaged to compute new variables representing each of the 10 domains. Table 7 provides the number of participants, *Mean*, *Medians*, *SDs*, ranges, frequencies and percentages for answers to Items 28, 29, and 31 of the survey as well as each of the 10 domain variables.

Table 6
Frequency and Percentage of Direct and Indirect Services

	ESC Division (Full Sample)	Alabama	Kentucky	Mississippi	Tennessee
Individual Academic	n = 12 18.5%	n = 1 7.1%	n = 5 26.4%	--	n = 6 19.3%
Individual Behavioral/ Social-Emotional	n = 20 31.3%	n = 4 28.5%	n = 8 42.2%	--	n = 8 26.7%
Group Academic	n = 6 9.2%	n = 1 7.1%	n = 4 21.1%	--	n = 1 3.2%
Group Behavioral/ Social-Emotional	n = 13 20.0%	n = 3 21.4%	n = 6 31.6%	--	n = 4 12.9%
In-Service Programs					
None	n = 26 40.0%	n = 6 42.9%	n = 8 42.1%	--	n = 12 38.7%
1 – 4	n = 37 56.9%	n = 7 50.0%	n = 10 52.6%	n = 1 100%	n = 19 61.3%
5 – 9	n = 2 3.1%	n = 1 7.1%	n = 1 5.3%	--	--
Parent Presentations					
None	n = 55 84.6%	n = 12 85.7%	n = 15 78.9%	n = 1 100%	n = 27 87.1%
1 – 4	n = 10 15.4%	n = 2 14.3%	n = 4 21.1%	--	n = 4 12.9%

Domain 1: Data-Based Decision Making and Accountability

On average, participants reported they spend one-half their time engaged in Data-Based Decision Making and Accountability domain ($M = 3.97$, $Mdn = 4.00$, $SD = .43$) during a typical school year. Specifically, they reported that assessment-related activities (e.g., administering, scoring, writing reports, records review) accounted for most of their practice ($M = 5.98$, $Mdn = 6$, $SD = .875$). Similarly, participants reported that conducting individual evaluations for special education eligibility also accounted for the majority of their practice ($M = 6.17$, $Mdn = 6.00$, $SD = .840$). Conversely, participants reported that collecting, analyzing, and interpreting data about students' strengths and needs for reasons other than special education eligibility accounted for a little of their practice ($M = 2.15$, $Mdn = 2.00$, $SD = .833$), and collecting, analyzing, and

interpreting data to develop and evaluate system-level or school-wide practices accounted for hardly any of their practice ($M = 1.58$, $Mdn = 1.00$, $SD = .846$).

Domain 2: Consultation and Collaboration

Participants reported engaging in Consultation and Collaboration domain services and practices between occasionally and one-half of their time ($M = 3.68$, $Mdn = 3.67$, $SD = .69$).

Within this domain, participants reported the highest level of involvement with regard to participation in referral, eligibility, and IEP meetings ($M = 5.43$, $Mdn = 6.00$, $SD = 1.00$).

Occasional involvement was reported for intervention planning and team meetings ($M = 3.02$, $Mdn = 3.00$, $SD = 1.061$), consulting and collaborating with a team to develop instructional supports ($M = 3.14$, $Mdn = 3.00$, $SD = 1.144$), and consultation with general education staff ($M = 2.95$, $Mdn = 3.00$, $SD = 1.152$). Little to rare involvement was reported for consultation with families and parents ($M = 2.58$, $Mdn = 2.00$, $SD = .973$) and consultation and collaboration

Table 7
Descriptive Statistics for Actual Practices of ESC School Psychologists

NASP Domain	Range	M	Mdn	SD	Frequency n (%)						
					None at All/ Never	A Little/ Rarely	Occasionally	About Half	Quite a Bit	Very Much / Most of the Time	Almost All / Always
Domain 1: Data- Based Decision Making and Accountability^a	2 – 5	3.97	4.00	.43	--	1 (1.5)	3 (4.6)	52 (80.0)	9 (13.8)	--	--
Assessment-related activities (e.g., administering, scoring, writing reports, records review) ^a	3 – 7	5.98	6.00	.88	--	--	1 (1.5)	3 (4.6)	10 (15.4)	33 (50.8)	18 (27.7)
Collecting, analyzing, and interpreting data about student strengths and needs for reasons other than special education eligibility ^a	1 – 3	2.15	2.00	.83	18 (27.7)	19 (29.2)	28 (43.1)	--	--	--	--
Conducting individual evaluations for special education eligibility ^a	3 – 7	6.17	6.00	.84	--	--	1 (1.5)	2 (3.1)	6 (9.2)	32 (49.2)	24 (36.9)
Collecting, analyzing and interpreting data to	1 – 4	1.58	1.00	.85	41 (63.1)	11 (16.9)	12 (18.5)	1 (1.5)	--	--	--

develop and evaluate
system-level or school-
wide programs^a

Domain 2:												
Consultation and Collaboration^b	3 – 5	3.68	3.67	.69	--	--	24 (34.4)	31 (48.4)	11 (17.2)	--	--	
Referral, eligibility, IEP meetings ^a	3 – 7	5.43	6.00	1.00	--	--	4 (6.2)	6 (9.2)	19 (29.2)	30 (46.2)	6 (9.2)	
Intervention planning and team meetings ^b	1 – 6	3.02	3.00	1.06	4 (6.2)	13 (20.0)	34 (52.3)	3 (7.7)	7 (10.8)	1 (1.5)	--	
Consultation with general education staff ^a	1 – 7	2.95	3.00	1.15	3 (4.6)	19 (29.2)	32 (49.2)	4 (6.2)	4 (6.2)	2 (3.1)	1 (1.5)	
Consultation with families/parents ^b	1 – 6	2.58	2.00	.97	3 (4.6)	33 (50.8)	22 (33.8)	1 (1.5)	4 (6.2)	1 (1.5)	--	
Consulting and collaborating with a team to develop instruction supports ^a	1 – 6	3.14	3.00	1.14	4 (6.2)	12 (18.5)	32 (49.2)	7 (10.8)	8 (12.3)	2 (3.1)	--	
Consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs ^a	1 – 6	2.00	2.00	1.10	26 (40.0)	21 (32.3)	14 (21.5)	1 (1.5)	2 (3.1)	1 (1.5)	--	
Domain 3:												
Interventions and	1 – 5	2.1	2.00	.78	14 (21.5)	35 (53.9)	12 (18.4)	3 (4.7)	1 (1.5)	--	--	

Instructional Support to Develop Academic Skills^a											
Direct academic or social skill intervention ^a	1 – 5	1.54	1.00	.92	42 (64.6)	16 (24.6)	4 (6.2)	1 (1.5)	2 (3.1)	--	--
Consulting and collaborating with a team to develop instruction supports ^a	1 – 6	3.14	3.00	1.14	4 (6.2)	12 (18.5)	32 (49.2)	7 (10.8)	8 (12.3)	2 (3.1)	--
Providing interventions and instructional support to develop academic skills ^a	1 – 5	1.63	1.00	.84	36 (55.4)	19 (29.2)	9 (13.8)	--	1 (1.5)	--	--
Domain 4: Interventions and Mental Health Services to Develop Social and Life Skills^a											
Counseling ^a	1 – 4	1.64	1.33	.71	33 (50.8)	27 (41.5)	2 (3.1)	3 (4.6)	--	--	--
Direct academic or social skill intervention ^a	1 – 5	1.54	1.00	.92	42 (64.6)	16 (24.6)	4 (6.2)	1 (1.5)	2 (3.1)	--	--
Providing mental and behavioral health	1 – 5	1.98	2.00	.98	24 (36.9)	23 (35.4)	15 (32.1)	1 (1.5)	2 (3.1)	--	--

services and interventions^a

Domain 5: School-Wide Services to Promote Learning^b	1 – 4	1.79	1.5	.83	27 (42.2)	24 (37.5)	9 (14.1)	4 (6.2)	--	--	--
District level planning/collaboration ^b	1 – 6	1.91	2.00	1.04	26 (40.0)	25 (38.5)	9 (13.8)	2 (3.1)	1 (1.5)	1 (1.5)	--
Collecting, analyzing and interpreting data to develop and evaluate system-level or school-wide programs ^a	1 – 4	1.58	1.00	.85	41 (63.1)	11 (16.9)	12 (18.5)	1 (1.5)	--	--	--
Consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs ^a	1 – 6	2.00	3.00	1.10	26 (40.0)	21 (32.3)	14 (21.5)	1 (1.5)	2 (3.1)	1 (1.5)	--
Developing and implementing school-wide strategies to promote safe and supportive learning environments and student wellness ^a	1 – 5	1.63	1.00	.88	37 (56.9)	18 (27.7)	8 (12.3)	1 (1.5)	1 (1.5)	--	--
Domain 6: Preventive and Responsive Services^a	1 – 4	1.68	1.67	.71	31 (47.7)	25 (38.5)	8 (12.3)	1 (1.5)	--	--	--

Crisis intervention ^a	1 – 4	1.71	2.00	.81	32 (49.2)	21 (32.3)	11 (16.9)	1 (1.5)	--	--	--
Prevention or early intervention activities ^a	1 – 4	1.46	1.00	.77	44 (67.7)	14 (21.5)	5 (7.7)	2 (3.1)	--	--	--
Participating in school crisis prevention and response efforts ^a	1 – 5	1.86	2.00	.95	30 (46.2)	17 (26.2)	16 (24.6)	1 (1.5)	1 (1.5)	--	--
Domain 7: Family-School Collaboration Services^b	1 – 4	2.05	2.00	.68	3 (4.7)	42 (65.6)	15 (23.5)	4 (6.2)	--	--	--
Consultation with families/parents ^b	1 – 6	2.58	2.00	.97	3 (4.6)	33 (50.8)	22 (33.8)	1 (1.5)	4 (6.2)	1 (1.5)	--
Providing services to families and promoting family engagement ^a	1 – 3	1.51	1.00	.66	38 (58.5)	21 (32.3)	6 (9.2)	--	--	--	--
Domain 8: Diversity in Development and Learning^a	1 – 4	2.79	3.00	.86	5 (7.7)	16 (24.6)	27 (41.5)	17 (26.2)	--	--	--
Collecting, analyzing, and interpreting data about student strengths and needs for reasons other than special education eligibility ^a	1 – 3	2.15	2.00	.83	18 (27.7)	19 (29.2)	28 (43.1)	--	--	--	--

Participating in meetings for IEP development ^a	1 – 7	3.97	4.00	1.74	4 (6.2)	12 (18.5)	16 (24.6)	2 (3.1)	15 (23.1)	13 (20.0)	3 (4.6)
Evaluation or meetings for 504 development ^a	1 – 5	2.26	2.00	.99	17 (26.2)	20 (30.8)	24 (36.9)	2 (3.1)	2 (3.1)	--	--
Domain 9: Research and Program Evaluation^a	1 – 3	1.62	1.50	.63	31 (47.7)	25 (38.5)	9 (13.8)	--	--	--	--
Program evaluation/research ^a	1 – 4	1.38	1.00	.63	44 (67.7)	18 (27.7)	2 (3.1)	4 (1.5)	--	--	--
Collecting, analyzing and interpreting data to develop and evaluate system-level or school-wide programs ^a	1 – 4	1.58	1.00	.85	41 (63.1)	11 (16.9)	12 (18.5)	1 (1.5)	--	--	--
Consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs ^a	1 – 6	2.00	3.00	1.10	26 (40.0)	21 (32.3)	14 (21.5)	1 (1.5)	2 (3.1)	1 (1.5)	--
Research or review of research to improve practice ^a	1 – 3	1.52	1.00	.73	40 (61.5)	16 (24.6)	9 (13.8)	--	--	--	--
Domain 10: Legal, Ethical, and Professional Practice^a	1 – 4	1.77	1.67	.73	30 (46.1)	23 (35.4)	10 (15.3)	2 (3.0)	--	--	--

Supervision ^a	1 – 5	1.58	1.00	.93	43 (66.2)	9 (13.8)	11 (16.9)	1 (1.5)	1 (1.5)	--	--
Providing supervision/mentorship ^a	1 – 5	1.72	1.00	.96	37 (56.9)	12 (18.5)	14 (21.5)	1 (1.5)	1 (1.5)		
In-service trainings or presentations ^a	1 – 5	2.00	2.00	.85	19 (29.2)	30 (26.2)	14 (21.5)	1 (1.5)	1 (1.5)	--	--

^a*n* = 65 for each group, ^b*n* = 64 for each group.

regarding developing and evaluating system-level or school-wide programs ($M = 2.00$, $Mdn = 2.00$, $SD = 1.104$).

Domain 3: Interventions and Instructional Support to Develop Academic Skills

Participants within the ESC reported minimal involvement with the Interventions and Instructional Supports to Develop Academic Skills domain in a typical school year ($M = 2.1$, $Mdn = 2.00$, $SD = .78$). They reported that the most involvement in this domain was related to consulting and collaborating with a team to develop instructional support ($M = 3.14$, $Mdn = 3.14$, $SD = 1.14$) occasionally during a typical year. They reported no to rare involvement in providing direct academic or social skill intervention ($M = 1.54$, $Mdn = 1.00$, $SD = .92$) and providing interventions and instructional support to develop academic skills ($M = 1.63$, $Mdn = 1.00$, $SD = .84$).

Domain 4: Interventions and Mental Health Services to Develop Social and Life Skills

Participants reported no to little involvement in engaging in the Interventions and Mental Health Services to Develop Social and Life Skills domain of the NASP Practice Model ($M = 1.64$, $Mdn = 1.33$, $SD = .71$) which reflects interventions and mental health services to develop social and life skills. Within this domain, participants reported that providing mental and behavioral health interventions takes up little of their practice ($M = 1.98$, $Mdn = 2.0$, $SD = .98$). They also reported no to rare involvement related to providing counseling ($M = 1.38$, $Mdn = 1.00$, $SD = .65$) or direct academic or social skill intervention ($M = 1.54$, $Mdn = 1.00$, $SD = .98$).

Domain 5: School-Wide Services to Promote Learning

Participants in the ESC division reported never to rarely engaging in practices related to the School-Wide Services to Promote Learning domain ($M = 1.79$, $Mdn = 1.5$, $SD = .83$). Participants reported engaging in consulting and collaborating with a team regarding developing

and evaluating system-level or school-wide programs rarely to occasionally ($M = 2.00$, $Mdn = 3.00$, $SD = 1.10$). They reported rare/little involvement with district level planning and collaboration ($M = 1.91$, $Mdn = 2.00$, $SD = 1.04$). Participants reported never to rarely engaging in data collection, analysis, and interpretation to develop and evaluate system-level or school-wide programs ($M = 1.58$, $Mdn = 1.00$, $SD = .85$) and never to rarely engaging in developing and implementing school-wide strategies to promote safe and supportive learning environments and student wellness ($M = 1.63$, $Mdn = 1.00$, $SD = .88$).

Domain 6: Preventive and Responsive Services

Overall, participants reported engaging never to very little in the Preventive and Responsive Services domain ($M = 1.68$, $Mdn = 1.67$, $SD = .71$). More specifically, participants reported that they rarely engage in crisis intervention ($M = 1.71$, $Mdn = 2.00$, $SD = .81$) or school crisis prevention and response efforts ($M = 1.86$, $Mdn = 2.00$, $SD = .95$). They also reported never to rarely engaging in prevention or early intervention activities ($M = 1.46$, $Mdn = 1.00$, $SD = 1.00$).

Domain 7: Family-School Collaboration Services

The Family-School Collaboration Services domain was reported as accounting for little of participants' practice ($M = 2.05$, $Mdn = 2.05$, $SD = .68$). Participants reported they rarely consult with parents and families in a typical school year ($M = 2.58$, $Mdn = 2.00$, $SD = .97$). They also reported that they never to rarely provided services to families or promoted family engagement ($M = 1.51$, $Mdn = 1.00$, $SD = .66$).

Domain 8: Diversity in Development and Learning

Participants reported that they occasionally participate in practices that fall under the Diversity in Development and Learning domain of the NASP Practice Model ($M = 2.79$, $Mdn =$

3.00, $SD = .86$). Participants were involved in about one-half of their time in meetings for IEP development ($M = 3.97$, $Mdn = 4.00$, $SD = 1.74$). They reported little or rare involvement participating in evaluations or meetings for 504 development ($M = 2.26$, $Mdn = 2.00$, $SD = .99$). They also reported little to rare involvement collecting, analyzing, and interpreting data about student strengths and needs for reasons other than special education eligibility ($M = 2.15$, $Mdn = 2.00$, $SD = .83$).

Domain 9: Research and Program Evaluation

Participants reported none to little of their time engaged in the Research and Program Evaluation domain ($M = 1.62$, $Mdn = 1.50$, $SD = .63$). They reported the highest level of involvement consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs ($M = 2.00$, $Mdn = 3.00$, $SD = 1.10$). The other services under this domain were reported as comprising virtually none of participants' typical practice: program evaluation/research ($M = 1.38$, $Mdn = 1.00$, $SD = .63$); collecting, analyzing, and interpreting data to develop and evaluate system-level or school-wide programs ($M = 1.58$, $Mdn = 1.00$, $SD = .85$); and research or review of research to improve practice ($M = 1.52$, $Mdn = 1.00$, $SD = .73$).

Domain 10: Legal, Ethical, and Professional Practice

As a whole, participants reported never to rarely engaging in practices under the Legal, Ethical, and Professional Practice domain of the NASP Practice Model ($M = 1.77$, $Mdn = 1.67$, $SD = .73$). They reported engaging in little involvement providing in-service presentations and trainings ($M = 2.00$, $Mdn = 2.00$, $SD = .85$), but less involvement in supervision ($M = 1.58$, $Mdn = 1.00$, $SD = .93$) and providing supervision/mentorship ($M = 1.72$, $Mdn = 1.00$, $SD = .96$).

Research Question 2

The second research question was, “Which school psychological practices and domains of a comprehensive service delivery model do school psychologists in the ESC perceive as most needed in their current setting?” This question was answered using descriptive statistics of responses to Items 39 – 41 of the survey which took the same practices and services from Items 28, 29, and 31 and rephrased them to ask how much of the participants’ practice or how often they would need to engage in them to best meet the needs of their students. Responses used the same 7-point Likert scale (1 = never/not at all, 2 = a little/rarely, 3 = occasionally, 4 = about half, 5 = quite a bit, 6 = very much/most of the time, 7 = almost all/always) as Items 28, 29, and 31 from the first research question. The items related to needed practices within each NASP domain were averaged to compute new variables representing each of the 10 domains. Table 8 provides the number of participants, *Mean*, *Medians*, *Standard Deviations*, ranges, frequencies and percentages for answers to Items 39 – 41 of the survey as well as each of the 10 domain variables.

Domain 1: Data-Based Decision Making and Accountability

School psychologists who participated in this study rated the Data-Based Decision Making and Accountability domain as being needed a little more than one-half of their practice ($M = 4.25$, $Mdn = 4.25$, $SD = .70$). They rated that assessment-related activities were needed quite a bit ($M = 4.77$, $Mdn = 5.00$, $SD = 1.09$). They rated other practices within this domain as being needed about one-half of their time: collecting, analyzing, and interpreting data about student strengths and needs for reasons other than special education eligibility ($M = 3.97$, $Mdn = 4.00$, $SD = 1.13$); conducting individual evaluations for special education eligibility ($M = 4.43$,

$Mdn = 4.00$, $SD = 1.08$); and collecting, analyzing, and interpreting data to develop and evaluate system-level or school-wide programs ($M = 3.83$, $Mdn = 4.00$, $SD = 1.17$).

Domain 2: Consultation and Collaboration

Participants rated the Consultation and Collaboration domain as being needed about one-half of their practice time ($M = 4.11$, $Mdn = 4.00$, $S = .90$). Specifically, they rated that quite a bit of their practice is needed in referral, eligibility, and IEP meetings ($M = 4.48$, $Mdn = 5.00$, $SD = 1.08$). They rated that one-half of their time is needed to engage in intervention planning and team meetings to best serve their students ($M = 4.32$, $Mdn = 4.00$, $SD = 1.04$) as well as in consulting and collaborating with a team to develop instruction supports ($M = 4.14$, $Mdn = 4.00$, $SD = 1.17$). The participants also indicated that in order to best serve their students, that one-half of their time is needed for consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs ($M = 3.97$, $Mdn = 4.00$, $SD = 1.27$).

Consultation with the general education staff was also rated as needed one-half of their time ($M = 4.05$, $Mdn = 4.00$, $SD = 1.30$) whereas consultation with families and parents was rated as needed occasionally ($M = 3.68$, $Mdn = 3.00$, $SD = 1.23$).

Domain 3: Interventions and Instructional Support to Develop Academic Skills

Participants rated practices within the Interventions and Instructional Support to Develop Academic Skills domain as being needed a little more than occasionally ($M = 3.67$, $Mdn = 3.33$, $SD = 1.08$). Specifically, they rated consulting and collaborating with a team to develop instruction supports as being needed one-half of the time ($M = 4.14$, $Mdn = 4.00$, $SD = 1.12$). They also rated direct academic or social skill intervention ($M = 3.49$, $Mdn = 3.00$, $SD = 1.52$) and providing interventions and instructional support to develop academic skills ($M = 3.38$, $Mdn = 3.00$, $SD = 1.28$) as being occasionally needed in their practice.

Table 8*Descriptive Statistics for Perceived Needed Practices of ESC School Psychologists*

NASP Domain	Range	M	Mdn	SD	Frequency n (%)						
					None at All/ Never	A Little/ Rarely	Occasionally	About Half	Quite a Bit	Very Much / Most of the Time	Almost All / Always
Domain 1: Data-Based Decision Making and Accountability^a	2 – 7	4.25	4.25	.70	--	1 (1.5)	4 (6.2)	34 (52.3)	24 (36.9)	1 (1.6)	1 (1.5)
Assessment-related activities (e.g., administering, scoring, writing reports, records review) ^a	2 – 7	4.77	5.00	1.09	--	1 (1.5)	7 (10.8)	17 (26.2)	24 (36.9)	13 (20.0)	3 (4.6)
Collecting, analyzing, and interpreting data about student strengths and needs for reasons other than special education eligibility ^a	2 – 7	3.97	4.00	1.13	--	4 (6.2)	23 (35.4)	15 (23.1)	18 (27.7)	4 (6.2)	1 (1.5)
Conducting individual evaluations for special education eligibility ^a	1 – 7	4.43	4.00	1.08	1 (1.5)	--	10 (15.4)	24 (36.9)	21 (32.3)	7 (10.8)	2 (3.1)
Collecting, analyzing and interpreting data to develop and evaluate system-level or school- wide programs ^a	2 – 6	3.83	4.00	1.17	--	7 (10.8)	25 (38.5)	9 (13.8)	20 (30.8)	4 (6.2)	--

NASP Domain	Range	<i>M</i>	<i>Mdn</i>	<i>SD</i>	Frequency n (%)							
					None at All/ Never	A Little/ Rarely	Occasionally	About Half	Quite a Bit	Very Much / Most of the Time	Almost All / Always	
Domain 2:												
Consultation and Collaboration^b	3 – 7	4.11	4.00	.90	--	--	18 (27.7)	24 (36.9)	19 (29.2)	3 (4.7)	1 (1.5)	
Referral, eligibility, IEP meetings ^a	3 – 7	4.48	5.00	1.08	--	--	15 (23.1)	17 (26.2)	21 (32.3)	11 (16.9)	1 (1.5)	
Intervention planning and team meetings ^b	3 – 6	4.32	4.00	1.04	--	--	18 (27.7)	18 (27.7)	19 (29.2)	10 (15.4)	--	
Consultation with general education staff ^a	2 – 7	4.05	4.00	1.30	--	5 (7.7)	24 (36.9)	11 (16.9)	15 (23.1)	8 (12.3)	2 (3.1)	
Consultation with families/parents ^b	2 – 7	3.68	3.00	1.23	--	10 (15.4)	25 (38.5)	12 (18.5)	13 (20.0)	4 (6.2)	1 (1.5)	
Consulting and collaborating with a team to develop instruction supports ^a	3 – 7	4.14	4.00	1.17	--	--	24 (36.9)	17 (26.2)	18 (27.7)	3 (4.6)	3 (4.6)	
Consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs ^a	1 – 7	3.97	4.00	1.27	1 (1.5)	4 (6.2)	25 (38.5)	8 (12.3)	23 (35.4)	1 (1.5)	3 (4.6)	
Domain 3:												
Interventions and Instructional Support	2 – 6	3.67	3.33	1.08	--	6 (9.2)	29 (44.6)	14 (21.6)	14 (21.5)	2 (3.1)	--	

NASP Domain	Range	<i>M</i>	<i>Mdn</i>	<i>SD</i>	Frequency n (%)						
					None at All/ Never	A Little/ Rarely	Occasionally	About Half	Quite a Bit	Very Much / Most of the Time	Almost All / Always
to Develop Academic Skills^a											
Direct academic or social skill intervention ^a	1 – 7	3.49	3.00	1.52	5 (7.7)	14 (21.5)	16 (24.6)	14 (21.5)	7 (10.8)	8 (12.3)	1 (1.5)
Consulting and collaborating with a team to develop instruction supports ^a	3 – 7	4.14	4.00	1.12	--	--	24 (36.9)	17 (26.2)	18 (27.7)	3 (4.6)	3 (4.6)
Providing interventions and instructional support to develop academic skills ^a	2 – 7	3.38	3.00	1.28	--	19 (29.2)	22 (33.8)	9 (13.8)	11 (16.9)	3 (4.6)	1 (1.5)
Domain 4: Interventions and Mental Health Services to Develop Social and Life Skills^a											
Counseling ^a	1 – 7	3.37	3.00	1.54	10 (15.4)	5 (7.7)	24 (36.9)	12 (18.5)	6 (9.2)	7 (10.8)	1 (1.5)
Direct academic or social skill intervention ^a	1 – 7	3.49	3.00	1.52	5 (7.7)	14 (21.5)	16 (24.6)	14 (21.5)	7 (10.8)	8 (12.3)	1 (1.5)

NASP Domain	Range	M	Mdn	SD	Frequency n (%)						
					None at All/ Never	A Little/ Rarely	Occasionally	About Half	Quite a Bit	Very Much / Most of the Time	Almost All / Always
Providing mental and behavioral health services and interventions ^a	1 – 6	3.97	4.00	1.25	2 (3.1)	3 (4.6)	21 (32.3)	17 (26.2)	13 (20.0)	9 (13.8)	--
Domain 5: School-Wide Services to Promote Learning^b	2 – 6	3.69	3.75	1.05	--	7 (10.8)	23 (35.4)	17 (26.1)	16 (24.6)	2 (3.1)	--
District level planning/collaboration ^b	1 – 7	3.15	3.00	1.22	3 (4.6)	14 (21.5)	32 (49.2)	7 (10.8)	5 (7.7)	3 (4.6)	1 (1.5)
Collecting, analyzing and interpreting data to develop and evaluate system-level or school-wide programs ^a	2 – 6	3.83	4.00	1.17	--	7 (10.8)	25 (38.5)	9 (13.8)	20 (30.8)	4 (6.2)	--
Consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs ^a	1 – 7	3.97	4.00	1.27	1 (1.5)	4 (6.2)	25 (38.5)	8 (12.3)	23 (35.4)	1 (1.5)	3 (4.6)
Developing and implementing school-wide strategies to promote safe and supportive learning	1 – 7	3.80	4.00	1.36	3 (4.6)	4 (6.2)	25 (38.5)	14 (21.5)	11 (16.9)	6 (9.2)	2 (3.1)

NASP Domain	Range	<i>M</i>	<i>Mdn</i>	<i>SD</i>	Frequency n (%)							
					None at All/ Never	A Little/ Rarely	Occasionally	About Half	Quite a Bit	Very Much / Most of the Time	Almost All / Always	
environments and student wellness ^a												
Domain 6: Preventive and Responsive Services^a	1 – 6	3.22	3.00	1.15	4 (6.2)	11 (16.9)	28 (43.1)	12 (18.4)	7 (10.8)	3 (4.6)	--	
Crisis intervention ^a	1 – 6	3.02	3.00	1.29	7 (10.8)	15 (23.1)	27 (41.5)	5 (7.7)	8 (12.3)	3 (4.6)	--	
Prevention or early intervention activities ^a	1 – 7	3.37	3.00	1.43	4 (6.2)	13 (20.0)	26 (40.0)	8 (12.3)	6 (9.2)	7 (10.8)	1 (1.5)	
Participating in school crisis prevention and response efforts ^a	1 – 7	3.28	3.00	1.22	3 (4.6)	11 (16.9)	32 (49.2)	7 (10.8)	9 (13.8)	2 (3.1)	1 (1.5)	
Domain 7: Family- School Collaboration Services^b	2 – 6	3.43	3.00	.95	--	6 (9.2)	28 (43.1)	19 (29.2)	8 (12.3)	4 (6.2)	--	
Consultation with families/parents ^b	2 – 7	3.68	3.00	1.23	--	10 (15.4)	25 (38.5)	12 (18.5)	13 (20.0)	4 (6.2)	1 (1.5)	
Providing services to families and promoting family engagement ^a	1 – 6	3.18	3.00	.93	1 (1.5)	9 (13.8)	42 (64.6)	4 (6.2)	8 (12.3)	1 (1.5)	--	

NASP Domain	Range	<i>M</i>	<i>Mdn</i>	<i>SD</i>	Frequency n (%)						
					None at All/ Never	A Little/ Rarely	Occasionally	About Half	Quite a Bit	Very Much / Most of the Time	Almost All / Always
Domain 8: Diversity in Development and Learning^a	2 – 5	3.46	3.33	.64	--	3 (4.6)	31 (47.7)	28 (43.1)	3 (4.6)	--	--
Collecting, analyzing, and interpreting data about student strengths and needs for reasons other than special education eligibility ^a	2 – 7	3.97	4.00	1.13	--	4 (6.2)	23 (35.4)	15 (23.1)	18 (27.7)	4 (6.2)	1 (1.5)
Participating in meetings for IEP development ^a	1 – 6	3.72	3.00	1.17	1 (1.5)	6 (9.2)	27 (41.5)	11 (16.9)	16 (24.6)	4 (6.2)	--
Evaluation or meetings for 504 development ^a	1 – 5	2.68	3.00	.83	6 (9.2)	16 (24.6)	38 (58.5)	3 (4.6)	2 (3.1)	--	--
Domain 9: Research and Program Evaluation^a	2 – 6	3.39	3.50	.89	--	7 (10.8)	24 (36.9)	25 (38.5)	8 (12.3)	1 (1.5)	--
Program evaluation/research ^a	1 – 5	2.83	3.00	1.02	3 (4.6)	24 (36.9)	26 (40.0)	5 (7.7)	7 (10.8)	--	--
Collecting, analyzing and interpreting data to develop and evaluate system-level or school-wide programs ^a	2 – 6	3.83	4.00	1.17	--	7 (10.8)	25 (38.5)	9 (13.8)	20 (30.8)	4 (6.2)	--
Consulting and collaborating with a	1 – 7	3.97	4.00	1.27	1 (1.5)	4 (6.2)	25 (38.5)	8 (12.3)	23 (35.4)	1 (1.5)	3 (4.6)

NASP Domain	Range	<i>M</i>	<i>Mdn</i>	<i>SD</i>	Frequency n (%)							
					None at All/ Never	A Little/ Rarely	Occasionally	About Half	Quite a Bit	Very Much / Most of the Time	Almost All / Always	
team regarding developing and evaluating system-level or school-wide programs ^a												
Research or review of research to improve practice ^a	1 – 5	2.92	3.00	.97	4 (6.2)	15 (23.1)	34 (52.3)	6 (9.2)	6 (9.2)	--	--	
Domain 10: Legal, Ethical, and Professional Practice^a	1 – 6	2.69	2.67	.89	5 (7.7)	21 (32.3)	30 (46.2)	7 (10.7)	1 (1.6)	1 (1.5)	--	
Supervision ^a	1 – 6	2.94	3.00	1.03	12 (18.5)	22 (33.8)	23 (35.4)	4 (6.2)	3 (4.6)	--	1 (1.5)	
Providing supervision/mentorship ^a	1 – 6	2.62	3.00	1.10	10 (15.4)	18 (27.7)	30 (46.2)	3 (4.6)	2 (3.1)	2 (3.1)	--	
In-service trainings or presentations ^a	1 – 6	2.94	3.00	1.03	4 (6.2)	15 (23.1)	35 (53.8)	4 (6.2)	6 (9.2)	1 (1.5)	--	

^a*n* = 65 for each group, ^b*n* = 64 for each group.

Domain 4: Interventions and Mental Health Services to Develop Social and Life Skills

Participants rated needing the Interventions and Mental Health Services to Develop Social and Life Skills domain between occasionally and one-half of their time to best serve their students ($M = 3.61$, $M = 3.33$, $SD = 1.28$). Particularly, they rated that one-half of their time ($M = 3.97$, $Mdn = 4.00$, $SD = 1.25$) would be needed to best serve their students by providing mental and behavioral health services and interventions to best serve their students. Participants also rated that in order to best serve their students, they would need to occasionally provide direct academic and social skill interventions ($M = 3.49$, $Mdn = 4.00$, $SD = 1.25$) and occasionally provide counseling services ($M = 3.37$, $Mdn = 3.00$, $SD = 1.54$).

Domain 5: School Wide Services to Promote Learning

Participants in this study indicated that between occasionally and one-half of their time, they would need to engage in the School-Wide Services to Promote Learning domain to best serve their students ($M = 3.69$, $Mdn = 3.75$, $SD = 1.05$). They reported that one-half of their time would be needed to best serve their students by engagement in the following: collecting, analyzing and interpreting data to develop and evaluate system-level or school-wide programs ($M = 3.83$, $Mdn = 4.00$, $SD = 1.17$); consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs ($M = 3.97$, $Mdn = 4.00$, $SD = 1.27$); and developing and implementing school-wide strategies to promote safe and supportive learning environments and student wellness ($M = 3.80$, $Mdn = 4.00$, $SD = 1.36$). District level planning and collaboration was rated as being needed occasionally ($M = 3.69$, $Mdn = 3.00$, $SD = 1.22$).

Domain 6: Preventive and Responsive Services

School psychologist participants in this study rated practices within the Preventive and Response Services domain of the NASP Practice Model as being needed occasionally ($M = 3.22$, $Mdn = 3.00$, $SD = 1.15$). They also rated all three specific activities within this domain as being needed occasionally: crisis intervention ($M = 3.02$, $Mdn = 3.00$, $SD = 1.29$), prevention or early intervention activities ($M = 3.37$, $Mdn = 3.00$, $SD = 1.43$), and participating in school crisis prevention and response efforts ($M = 3.28$, $Mdn = 3.00$, $SD = 1.22$).

Domain 7: Family-School Collaboration Services

Overall, participants rated that activities within the domain of Family-School Collaboration Services are needed occasionally as part of their practice ($M = 3.43$, $Mdn = 3.00$, $SD = .95$). They rated consultation with families and parents as being needed occasionally to about one-half of their time ($M = 3.68$, $Mdn = 3.00$, $SD = 1.23$). They offered similar ratings for providing services to families and promoting family engagement ($M = 3.18$, $Mdn = 3.00$, $SD = .93$).

Domain 8: Diversity in Development and Learning

Regarding practices under the Diversity in Development and Learning domain of the NASP Practice Model, participants reported that they need to engage in these services somewhere between occasionally and one-half of their time ($M = 3.46$, $Mdn = 3.33$, $SD = .64$). More specifically, they indicated that collecting, analyzing, and interpreting data about student strengths and needs for reasons other than special education eligibility is needed about one-half of the time ($M = 3.97$, $Mdn = 4.00$, $SD = 1.13$) in their practice to best serve their students. They rated involvement in IEP meetings as being needed occasionally to about one-half of their

time ($M = 3.72$, $Mdn = 3.00$, $SD = 1.13$), and evaluation or meetings for 504 development as being needed occasionally ($M = 2.68$, $Mdn = 3.00$, $SD = .83$).

Domain 9: Research and Program Evaluation

Participants rated that occasionally to about one-half of their practice ($M = 3.39$, $Mdn = 3.50$, $SD = .89$) is needed to best serve their students within the Research and Program Evaluation. They indicated that about one-half their time is needed to engage in data-based decision making practices ($M = 3.83$, $Mdn = 4.00$, $SD = 1.17$) and consultation and collaboration practices ($M = 3.97$, $Mdn = 4.00$, $SD = 1.27$) related to developing and evaluating system-level or school-wide programs. They estimated that occasional practice in program evaluation/research ($M = 2.83$, $Mdn = 3.00$, $SD = 1.02$) and research or review of research to improve practice ($M = 2.92$, $Mdn = 3.00$, $SD = .97$) are needed to best serve their students.

Domain 10: Legal, Ethical, and Professional Practice

Within the Legal, Ethical, and Professional Practice domain of the NASP Practice Model, participants indicated that a little less than occasional time was needed ($M = 2.69$, $Mdn = 2.67$, $SD = .89$). Ratings of specific activities related to this domain were similar to one another: supervision ($M = 2.94$, $Mdn = 3.00$, $SD = 1.03$), providing supervision/mentorship ($M = 2.62$, $Mdn = 3.00$, $SD = 1.10$), and in-service trainings or presentations ($M = 2.94$, $Mdn = 3.00$, $SD = 1.03$).

Research Question 3

The third research question asked, “What differences exist between school psychologists’ actual practice and services and their perceptions of needed practices and services?” This question aimed to identify what differences existed, if any, between the actual practices and services reported by school psychologists in the ESC census division and the practices and

services they perceive as most needed in their current setting. The differences between Items 28, 29, 31 and Items 39 – 41, respectively, were analyzed using paired samples *t*-tests.

Test of Assumptions for Paired Samples *T*-test

There are several general assumptions for paired samples *t*-tests. The first assumption states that the dependent variable is an interval or ratio variable. This assumption approximated as all the variables measured for school psychologists' actual practices and services and their perceptions of needed practices and services are measured on a Likert-scale of 1 to 7, and there was notable variability in the responses to each item. Another assumption is that the scores are normally distributed. This assumption was tested by running Kolmogorov-Smirnov and Shapiro-Wilk tests of normality for the dependent variables. None of the dependent variables met this assumption. Although sample sizes over 30 are robust enough to tolerate violations of this assumption (Pallant, 2020), Wilcoxon signed-rank test was used to reduce Type I errors.

Paired Samples *T*-Tests

To examine the change in the dependent variable scores from the actual practices of school psychologists and the perceived needed (i.e., ideal) practices of school psychologists, paired samples *t*-tests were conducted. Wilcoxon signed-rank test was used due to the non-normal distribution of the dependent variables (see Table 9). Significant variables and effect sizes are reported in the following subsections.

Domain 1: Data-Based Decision Making and Accountability

Within the Data-Based Decision Making and Accountability domain of the NASP Practice Model (NASP, 2020c), there was a significant statistical difference between the amount of time engaged in data-based decision making and accountability practices (*Mdn* = 4.00) and the amount of time thought to be needed (*Mdn* = 4.25) to best serve students in the ESC division

($T=1017.5$, $p = .003$, $r = .377$). Although the difference between the medians was small and the effect size was medium, the difference was better captured in the specific practices measured by the survey which fall under this domain. For example, the difference between practice typically spent ($Mdn = 6.00$) and the amount thought to be needed ($Mdn = 5.00$) for assessment-related activities ($T = 21.0$, $p = .000$, $r = .737$), was statistically significant with a large effect size, meaning that school psychologists in the ESC division engage in assessment-related activities more than they think is needed to best serve the students in their schools. Similarly, there was a large, significant difference between the amount of practice typically spent ($Mdn = 6.00$) and the amount thought to be needed ($Mdn = 4.00$) conducting individual evaluations for special education eligibility ($T = 1637$, $p = .000$, $r = .813$), meaning that school psychologists in the ESC division spend significantly more of their practice conducting special education evaluations than they think is needed to best serve the students in their schools.

Among participants, the amount of time needed ($Mdn = 4.00$) engaged in collecting, analyzing, and interpreting data about student strengths and needs for non-special education purposes was significantly greater than the amount of time typically spent ($Mdn = 2.00$), $T = 1420.0$, $p = .000$, $r = .782$). Similarly, the amount of time needed ($Mdn = 4.00$) collecting, analyzing, and interpreting data to develop and evaluate system-level or school-wide programs was significantly greater than the amount of time typically spent in this practice ($Mdn = 1.00$), $T = 1647.0$, $p = .000$, $r = .817$).

Domain 2: Consultation and Collaboration

Similar to Domain 1, the difference between the participants' reported actual practice and needed practice across the Consultation and Collaboration domain of the NASP Practice Model was statistically significant, $T = 1886.5$, $p = .000$, $r = .756$. Participants reported needing more

engagement in this domain ($Mdn = 4.00$) than they actually provided in a typical school year ($Mdn = 3.67$). The differences between actual and needed practice were statistically significant for all variables within this domain. The difference with the largest effect size was for consultation and collaboration with a team regarding developing and evaluating system-level or school-wide programs, $T = 30.0$, $p = .000$, $r = .787$. Participants indicated that they rarely engaged in this practice within a typical school year ($Mdn = 2.00$) but thought they needed to engage in it about one-half of their time ($Mdn = 4.00$). The differences between actual and needed practice engaged in consulting and collaborating with a team to develop instruction supports ($T = 907.5$, $p = .000$, $r = .608$), intervention planning and team meetings ($T = 46.5$, $p = .000$, $r = .672$) and consulting with general education staff ($T = 115.0$, $p = .000$, $r = .626$) were also statistically significant with participants indicating that one-half of their time was needed ($Mdn = 4.00$) to engage in both of these activities compared to the occasional amount spent engaged in a typical school year ($Mdn = 3.00$). Participants also reported needing more engagement in consultation with families and parents ($Mdn = 3.00$) than was actually spent ($Mdn = 2.00$), $T = 1137.5$, $p = .000$, $r = .667$. The difference between time spent and time needed engaged in referral, eligibility, and IEP meetings was also significant ($T = 102.0$, $p = .000$, $r = .620$) but participants reported needing *less* time ($Mdn = 5.00$) engaged in these activities than they actually spend ($Mdn = 6.00$).

Domain 3: Interventions and Instructional Support to Develop Academic Skills

Overall, the difference between needed practice and actual reported for school psychological practices across the Interventions and Instructional Support to Develop Academic

Table 9*Discrepancies Between Actual and Perceived Needed Practices of School Psychologists*

Domain	Actual	Perceived	Difference	Wilcoxon Signed-Rank		
	<i>Mdn</i>	<i>Mdn</i>		<i>t</i>	<i>p</i>	<i>r</i>
1 Data-Based Decision Making and Accountability^a	4.00	4.25	-.25	1017.5	.003	.377
Assessment-related activities (e.g., administering, scoring, writing reports, records review) ^a	6.00	5.00	1.00	21.0	.000	.737
Collecting, analyzing, and interpreting data about student strengths and needs for reasons other than special education eligibility ^a	2.00	4.00	-2.00	1420.0	.000	.782
Conducting individual evaluations for special education eligibility ^a	6.00	4.00	2.00	1637.0	.000	.813
Collecting, analyzing and interpreting data to develop and evaluate system-level or school-wide programs ^a	1.00	4.00	-3.00	1647.0	.000	.817
2 Consultation and Collaboration^b	3.67	4.00	-.33	1886.5	.000	.756

Domain	Actual	Perceived	Difference	Wilcoxon Signed-Rank		
	<i>Mdn</i>	<i>Ideal Mdn</i>		<i>t</i>	<i>p</i>	<i>r</i>
Referral, eligibility, IEP meetings ^a	6.00	5.00	1.00	102.0	.000	.620
Intervention planning and team meetings ^b	3.00	4.00	-1.00	46.5	.000	.672
Consultation with general education staff ^a	3.00	4.00	-1.00	115.0	.000	.626
Consultation with families/parents ^b	2.00	3.00	-1.00	1137.5	.000	.667
Consulting and collaborating with a team to develop instruction supports ^a	3.00	4.00	-1.00	907.5	.000	.608
Consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs ^a	2.00	4.00	-2.00	30.0	.000	.787
3 Interventions and Instructional Support to Develop Academic Skills^a	2.00	3.33	-1.33	2012.0	.000	.861
Direct academic or social skill intervention ^a	1.00	3.00	-2.00	51.5	.000	.779

Domain	Actual	Perceived	Difference	Wilcoxon Signed-Rank		
	<i>Mdn</i>	<i>Mdn</i>		<i>t</i>	<i>p</i>	<i>r</i>
Consulting and collaborating with a team to develop instruction supports ^a	3.00	4.00	-1.00	907.5	.000	.608
Providing interventions and instructional support to develop academic skills ^a	1.00	3.00	-2.00	11.0	.000	.815
4 Interventions and Mental Health Services to Develop Social and Life Skills ^a	1.33	3.33	-2.00	2072.0	.000	.864
Counseling ^a	1.00	3.00	-2.00	6.0	.000	.770
Direct academic or social skill intervention ^a	1.00	3.00	-2.00	51.5	.000	.779
Providing mental and behavioral health services and interventions ^a	2.00	4.00	-2.00	8.5	.000	.815
5 School Wide Services to Promote Learning ^b	1.50	3.75	-2.25	.000	1.000	.000
District level planning/collaboration ^b	2.00	3.00	-1.00	99.0	.000	.683

Domain	Actual	Perceived Ideal	Difference	Wilcoxon Signed-Rank		
	<i>Mdn</i>	<i>Mdn</i>		<i>t</i>	<i>p</i>	<i>r</i>
Collecting, analyzing and interpreting data to develop and evaluate system-level or school-wide programs ^a	1.00	4.00	-3.00	1647.0	.000	.817
Consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs ^a	3.00	4.00	-1.00	30.0	.000	.787
Developing and implementing school-wide strategies to promote safe and supportive learning environments and student wellness ^a	1.00	4.00	-3.00	1703.0	.000	.821
6 Preventive and Responsive Services ^a	1.57	3.00	-1.43	.000	1.000	.000
Crisis intervention ^a	2.00	3.00	-1.00	11.5	.000	.729
Prevention or early intervention activities ^a	1.00	3.00	-2.00	1485.0	.000	.802
Participating in school crisis prevention and response efforts ^a	2.00	3.00	-1.00	.000	.000	.761

Domain		Actual	Perceived	Difference	Wilcoxon Signed-Rank		
		<i>Mdn</i>	<i>Mdn</i>		<i>t</i>	<i>p</i>	<i>r</i>
7	Family-School Collaboration Services^b	2.00	3.00	-1.00	1801.0	.000	.820
	Consultation with families/parents ^b	2.00	3.00	-1.00	1137.5	.000	.667
	Providing services to families and promoting family engagement ^a	1.00	3.00	-1.00	1653.0	.000	.828
8	Diversity in Development and Learning^a	3.00	3.33	-0.33	.000	1.000	.000
	Collecting, analyzing, and interpreting data about student strengths and needs for reasons other than special education eligibility ^a	2.00	4.00	-2.00	1420.0	.000	.782
	Participating in meetings for IEP development ^a	4.00	3.00	1.00	405.0	.132	.187
	Evaluation or meetings for 504 development ^a	2.00	3.00	-1.00	147.5	.002	.376
9	Research and Program Evaluation^a	1.50	3.50	-2.00	2138.0	.000	.865

Domain	Actual	Perceived	Difference	Wilcoxon Signed-Rank		
	<i>Mdn</i>	<i>Ideal Mdn</i>		<i>t</i>	<i>p</i>	<i>r</i>
Program evaluation/research ^a	1.00	3.00	-2.00	1512.0	.000	.786
Collecting, analyzing and interpreting data to develop and evaluate system-level or school-wide programs ^a	1.00	4.00	-3.00	1647.0	.000	.817
Consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs ^a	3.00	4.00	1.00	30.0	.000	.787
Research or review of research to improve practice ^a	1.00	3.00	-2.00	1358.0	.000	.771
10 Legal, Ethical, and Professional Practice ^a	1.67	2.67	-1.00	1699.0	.000	.765
Supervision ^a	1.00	3.00	-2.00	40.0	.000	.632
Providing supervision/mentorship ^a	1.00	3.00	-2.00	60.5	.000	.597
In-service trainings or presentations ^a	2.00	3.00	-1.00	1044.5	.000	.653

^a*n* = 65 for each group, ^b*n* = 64 for each group

Skills domain of the NASP Practice Model was statistically significant and large ($T = 2012.0$, $p = .000$, $r = .861$) with greater time being perceived as needed ($Mdn = 3.33$) than was actually being spent ($Mdn = 2.00$). Among participants, the amount of time needed ($Mdn = 3.00$) was greater than the amount of time spent ($Mdn = 1.00$) engaged in direct academic or social skills interventions, $T = 51.5$, $p = .000$, $r = .779$, and providing interventions and instructional support to develop academic skills, $T = 11.0$, $p = .000$, $r = .815$. Similarly, the difference in the amount of school psychologists' practice actually spent and needed consulting and collaborating with a team to develop instruction supports was significant ($T = 907.5$, $p = .000$, $r = .608$) with more time needed ($Mdn = 4.00$) than was actually spent ($Mdn = 3.00$).

Domain 4: Interventions and Mental Health Services to Develop Social and Life Skills

Similar to Domain 3, participants reported that more involvement in the Interventions and Mental Health Services to Develop Social and Life Skills domain of the NASP Practice Model was needed ($Mdn = 3.33$) versus the amount actually spent ($Mdn = 1.00$), and this difference was large, $T = 2072.0$, $p = .000$, $r = .864$. Among participants, the time needed ($Mdn = 3.00$) for direct academic or social skill intervention was greater than the time actually spent ($Mdn = 1.00$), $T = 51.5$, $p = .000$, $r = .770$. This difference was similar for counseling with participants reporting more time needed ($Mdn = 3.00$) than is typically spent ($Mdn = 1.00$), $T = 6.0$, $p = .000$, $r = .770$. Similarly, the time needed in providing mental and behavioral health services and interventions was greater ($Mdn = 4.00$) than the time typically spent ($Mdn = 2.00$), $T = 8.5$, $p = .000$, $r = .815$.

Domain 5: School-Wide Services to Promote Learning

The difference between time needed ($Mdn = 3.75$) and time spent ($Mdn = 1.50$) in the School-Wide Services to Promote Learning domain was not statistically significant ($T = .000$, p

= 1.000, $r = .000$). However, the differences between reported actual and needed time in each practice within this domain were significant and large. For example, participants reported needing more time ($Mdn = 4.00$) than is typically spent ($Mdn = 3.00$) engaged in consulting and collaborating with a team regarding developing and evaluating system-level or school-wide practices, $T = 30.0$, $p = .000$, $r = .787$. Participants also reported needing about one-half of their time ($Mdn = 4.00$) versus the occasional amount typically spent ($Mdn = 3.00$) in collecting, analyzing, and interpreting data to develop and evaluate system-level or school-wide programs, $T = 1647.0$, $p = .000$, $r = .817$, and developing and implementing school-wide strategies to promote safe and supportive learning environments and student wellness, $T = 1703.0$, $p = .000$, $r = .821$. The difference between the time needed ($Mdn = 3.00$) and time spent ($Mdn = 2.00$) in district level planning and collaboration was also large and significant, $T = 99.0$, $p = .000$, $r = .683$.

Domain 6: Preventive and Responsive Services

Discrepancies between actual ($Mdn = 1.57$) and needed ($Mdn = 3.00$) services in the Preventive and Responsive Services domain were not statistically significant ($T = .000$, $p = 1.000$, $r = .000$). However, the differences between all activities within this domain were statistically significant and large. For example, participants reported the greatest difference between actual ($Mdn = 1.00$) and needed practices ($Mdn = 3.00$) in prevention and early intervention activities ($T = 1485.0$, $p = .000$, $r = .802$). Similar differences were reported for actual ($Mdn = 2.00$) and needed ($Mdn = 3.00$) practices in crisis intervention ($T = 11.5$, $p = .000$,

$r = .729$), and actual ($Mdn = 2.00$) and needed ($Mdn = 3.00$) practices in participating in school crisis and response efforts ($T = .000$, $p = .000$, $r = .761$).

Domain 7: Family-School Collaboration Services

In general, participants reported a one-point difference ($T = 1801$, $p = .000$, $r = .820$) between their actual ($Mdn = 2.00$) and needed ($Mdn = 3.00$) practices across the Family-School Collaboration Services domain of the NASP Practice Model (NASP, 2020c). More specifically, participants reported needing more time ($Mdn = 3.00$) engaged in providing services to families and promoting family engagement than the time typically spent ($Mdn = 1.00$), $T = 1653.0$, $p = .000$, $r = .828$. More time was also reported needed ($Mdn = 3.00$) than the actual time spent ($Mdn = 2.00$) engaged in consultation with families and parents, $T = 1137.5$, $p = .000$, $r = .667$.

Domain 8: Diversity in Development and Learning

Within the Diversity in Development and Learning domain, the difference between actual and needed practice was significant in two activities. Participants reported needing more time in evaluation or meetings for 504 development ($Mdn = 3.00$) than was typically spent ($Mdn = 2.00$), and this difference was moderate, $T = 147.5$, $p = .002$, $r = .376$. Participants also reported needing more time ($Mdn = 4.00$) than time typically spent ($Mdn = 2.00$) in data collection about student strengths and weaknesses for reasons other than special education eligibility, $T = 1420.0$, $p = .000$, $r = .782$.

Domain 9: Research and Program Evaluation

The differences between actual and needed practices in the Research and Program Evaluation domain were significant and large for each activity in this domain, $T = 2138.0$, $p = .000$, $r = .865$. The difference between actual ($Mdn = 3.00$) and needed ($Mdn = 4.00$) time engaged in consulting and collaborating with a team regarding developing and evaluating

system-level or school-wide strategies was large, $T = 30.0$, $p = .000$, $r = .787$, indicating that participants thought more time was needed to engage in this activity than was typically provided. Participants also indicated that more time was needed ($Mdn = 4.00$) in data collection practices for school-wide or system-level programs than is typically spent ($Mdn = 1.00$), $T = 1647.0$, $p = .000$, $r = .817$. The same trend was found for program evaluation and research, $T = 1512$, $p = .000$, $r = .786$, and research or review of research to improve practice, $T = 1358.0$, $p = .000$, $r = .771$, with more time being needed ($Mdn = 3.00$) than is typically spent ($Mdn = 1.00$) in both of these practices.

Domain 10: Legal, Ethical, and Professional Practice

Participants reported needing more time ($Mdn = 2.67$) engaged in the Legal, Ethical, and Professional Practice domain to best serve the students in their schools than was actually given in a typical year ($Mdn = 1.67$), and this difference was large ($T = 1699.0$, $p = .000$, $r = .765$). Within this domain, the difference with the largest effect size was between actual and needed practice providing in-service trainings and presentations, $T = 1044.5$, $p = .000$, $r = .653$, with more time needed ($Mdn = 3.00$) than typically spent ($Mdn = 2.00$). Participants indicated needing occasional time spent ($Mdn = 3.00$) versus no time typically spent ($Mdn = 1.00$) in supervision, $T = 40.0$, $p = .000$, $r = .632$, and providing supervision/mentorship, $T = 60.5$, $p = .000$, $r = .632$.

Research Question 4

The fourth research question was, “What factors affect the discrepancies between school psychologists’ actual practice and services and their perceptions of needed practices and services?” This question addressed which factors affect the differences between school psychologists’ actual practice and services and their perceptions of needed practices and services. The two subparts to Research Question 4 were:

- a. Does geographical setting affect the differences between actual school psychological practice/service and perceptions of needed school psychological practices/services?
- b. Do school psychologists practicing in rural settings perceive certain practices and service domains as more needed than others compared to school psychologists practicing in urban or suburban settings?

Of particular interest, the study sought to determine whether the state (e.g., Alabama, Kentucky, Mississippi, or Tennessee) or geographical setting (e.g., urban, suburban, rural) where participants' practice affected discrepancies in their actual and perceived needed practices. A one-way ANOVA requires that the assumption of equal sample sizes and equality of variances. Descriptive statistics for state and geographical setting were generated and are reported in Tables 2 and 4. The assumption of equal sample sizes was violated for both variables. Levene's Test for Equality of Variances was conducted in SPSS to test for variances for the dependent variables (e.g., reported actual and needed practices). Three of the dependent variables were found in violation of this assumption: time spent in counseling, time spent in delivering mental and behavioral health interventions, and perceived needed time collecting data of students' strengths and weaknesses other than special education purposes. Due to violations of these two assumptions, non-parametric analyses were deemed more appropriate to answer the fourth research question of this study.

Geographic Variables

State-Level Differences

Data were analyzed using independent samples Kruskal-Wallis tests to determine whether the state in which participants' practice had any effect on their report of actual practices

during a typical school year and their perceived needed practices. Dunn-Bonferroni post-hoc tests were run for statistically significant variables to determine which states in particular differ from the others and affect actual and perceived needed school psychological practices and services. Median ratings for each state were reported for actual practices and needed practices in Appendix H.

Actual Practices. Kruskal-Wallis tests revealed statistically significant differences in actual practices across the four different states in eight different activities within five of the NASP Practice Model domains. Significant results are summarized in Table 10.

Domain 1. Within the Data-Based Decision Making and Accountability domain, a significant difference existed in actual practices in collecting, analyzing, interpreting data to identify student strengths and needs for reasons other than special education eligibility across the four different states, $c^2(3, n = 65) = 12.82, p = .005$. School psychologists in Tennessee reported significantly higher median rating ($Mdn = 3$) than school psychologists in Alabama ($p = .006$) who recorded a median rating of 1.

Table 10
Kruskal-Wallis Results for Actual Practices of School Psychologists in ESC Compared by State

Domain	Item	Kruskal-Wallis			Effect Size (ϵ^2)	Dunn-Bonferroni	
		<i>H</i>	<i>df</i>	<i>p</i>		Pairwise Comparison	<i>p</i>
Domain 1	Collecting, analyzing, and interpreting data to identify individual student strengths and needs for reasons other than special education eligibility	12.82	3	.005	.200	Alabama – Mississippi	1.000
						Alabama – Tennessee	.006
						Alabama – Kentucky	.524
						Mississippi – Tennessee	.546
						Mississippi – Kentucky	1.000
						Tennessee – Kentucky	.704

Domain	Item	Kruskal-Wallis			Dunn-Bonferroni		
		<i>H</i>	<i>df</i>	<i>p</i>	Effect Size (ϵ^2)	Pairwise Comparison	<i>p</i>
Domain 2	Intervention Planning and Team Meetings	10.78	3	.013	.171	Alabama – Mississippi	1.000
						Alabama – Tennessee	.035
						Alabama – Kentucky	.011
						Mississippi – Tennessee	1.000
						Mississippi – Kentucky	1.000
						Tennessee – Kentucky	1.000
	Consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs	8.43	3	.038	.132	Alabama – Mississippi	1.000
						Alabama – Tennessee	1.000
						Alabama – Kentucky	.031
						Mississippi – Tennessee	1.000
						Mississippi – Kentucky	1.000
						Tennessee – Kentucky	.232
Domain 4	Counseling	8.35	3	.039	.130	Alabama – Mississippi	1.000
						Alabama – Tennessee	1.000
						Alabama – Kentucky	.062
						Mississippi – Tennessee	1.000
						Mississippi – Kentucky	1.000
						Tennessee – Kentucky	.125
Domain 6	Crisis Intervention	8.53	3	.036	.133	Alabama – Mississippi	1.000
						Alabama – Tennessee	1.000
						Alabama – Kentucky	.080

Domain	Item	Kruskal-Wallis			Effect Size (ϵ^2)	Dunn-Bonferroni	
		<i>H</i>	<i>df</i>	<i>p</i>		Pairwise Comparison	<i>p</i>
						Mississippi – Tennessee	1.000
						Mississippi – Kentucky	.890
						Tennessee – Kentucky	.124
	Participating in school crisis prevention and response efforts	10.28	3	.016	.161	Alabama – Mississippi	1.000
						Alabama – Tennessee	1.000
						Alabama – Kentucky	.036
						Mississippi – Tennessee	1.000
						Mississippi – Kentucky	.744
						Tennessee – Kentucky	.067
Domain 8	Diversity in Development and Learning	22.40	3	.000	.350	Alabama – Mississippi	1.000
						Alabama – Tennessee	.001
						Alabama – Kentucky	.000
						Mississippi – Tennessee	1.000
						Mississippi – Kentucky	.967
						Tennessee – Kentucky	1.000
	Participating in meetings focused on the development of IEPs	24.71	3	.000	.386	Alabama – Mississippi	1.000
						Alabama – Tennessee	.021
						Alabama – Kentucky	.000
						Mississippi – Tennessee	1.000
						Mississippi – Kentucky	.328
						Tennessee – Kentucky	.057

Domain	Item	Kruskal-Wallis			Dunn-Bonferroni		
		<i>H</i>	<i>df</i>	<i>p</i>	Effect Size (ϵ^2)	Pairwise Comparison	<i>p</i>
	Participating in evaluations or meetings focused on the development of 504 plans	12.34	3	.006	.193	Alabama – Mississippi	.573
Alabama – Tennessee						.006	
Alabama – Kentucky						.050	
Mississippi – Tennessee						1.000	
Mississippi – Kentucky						1.000	
Tennessee – Kentucky						1.000	

Note. Significance values were adjusted by the Bonferroni correction for multiple tests.

Domain 2. Within practices related to the Consultation and Collaboration domain, a significant difference existed in actual time engaged in intervention planning and team meetings across the four different states, $c^2(3, n = 64) = 10.78, p = .013$. School psychologists in Tennessee ($Mdn = 3$) and Kentucky ($Mdn = 3$) reported significantly higher median ratings than school psychologists in Alabama ($p = .035, p = .011$) who recorded a median rating of 2. A significant difference also existed in actual time engaged in consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs across the four different states, $c^2(3, n = 65) = 8.43, p = .038$. Kentucky school psychologists reported a significantly higher median rating ($Mdn = 2$) than school psychologists in Alabama ($p = .031$), who reported a median rating of 1.

Domain 4. Within the Interventions and Mental Health Services to Develop Social and Life Skills domain, a significant difference existed in actual time engaged in counseling across the four different states, $c^2(3, n = 65) = 8.53, p = .039$. Post hoc tests did not yield statistically significant differences between any of the pairwise comparisons after the significance values were adjusted by the Bonferroni correction. However, Kentucky school psychologists reported a

higher median rating ($Mdn = 2$) for actual time spent in counseling than psychologists in Alabama ($p = .062$) and Tennessee ($p = .125$), who both reported median ratings of 1.

Domain 6. Within the Preventive and Responsive Services domain, a significant difference existed in actual time spent in crisis intervention across the four states, $c^2(3, n = 65) = 8.53, p = .036$. Although not significant after the Bonferroni correction, Kentucky school psychologists reported a higher median rating ($Mdn = 2$) for actual time spent in crisis intervention than school psychologists in Alabama ($p = .080$) and Tennessee ($p = .124$), who both reported median ratings of 1. Kruskal-Wallis analysis yielded a significant difference in actual time spent participating in school crisis prevention and response efforts across the four states, $c^2(3, n = 65) = 10.28, p = .016$. School psychologists in Kentucky reported a significantly higher median rating ($Mdn = 3$) than school psychologists in Alabama ($p = .036$), who reported a median rating of 1. Although not significant ($p = .067$), school psychologists' ratings in Kentucky ($Mdn = 3$) was also higher than the median rating of school psychologists in Tennessee ($Mdn = 1$).

Domain 8. A significant difference existed in actual time spent engaged in the Diversity in Development and Learning domain across the four states, $c^2(3, n = 65) = 22.40, p = .010$. School psychologists in Kentucky ($Mdn = 3.33$) and Tennessee ($Mdn = 3.00$) reported significantly higher median ratings than school psychologists in Alabama ($p = .000, p = .001$), who reported a median rating of 1.67. Within this domain, significant differences also existed across the four states in the actual time spent participating in meetings for IEP development, $c^2(3, n = 65) = 24.71, p = .000$, and evaluation or meetings for 504 development, $c^2(3, n = 65) = 12.34, p = .006$. School psychologists in Tennessee ($Mdn = 4$) and Kentucky ($Mdn = 6$) reported significantly ($p = .021, p = .000$) higher median ratings than school psychologists in Alabama

(*Mdn* = 2) for IEP meetings. Tennessee (*Mdn* = 3) and Kentucky (*Mdn* = 2) school psychologists also reported significantly ($p = .006, p = .050$) higher median ratings than Alabama (*Mdn* = 1) school psychologists for time spent in 504 development.

Perceived Needed Practices. Kruskal-Wallis tests revealed statistically significant differences in actual practices across the four different states in three different activities across four of the NASP Practice Model domains. Table 11 details the significant findings for differences in perceived needed practices accounted for by state.

Table 11
Kruskal-Wallis Results for Needed Practices of School Psychologists in ESC Compared by State

Domain	Item	Kruskal-Wallis			Effect Size (ϵ^2)	Dunn-Bonferroni	
		<i>H</i>	<i>df</i>	<i>p</i>		Pairwise Comparison	<i>p</i>
Domains 2/8	Consulting and collaborating with a team responsible for developing and evaluating students in need of instructional supports	7.89	3	.048	.123	Alabama – Mississippi	1.000
						Alabama – Tennessee	.478
						Alabama – Kentucky	1.000
						Mississippi – Tennessee	1.000
						Mississippi – Kentucky	1.000
						Tennessee – Kentucky	.086
Domains 2/5/9	Consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs	9.96	3	.019	.142	Alabama – Mississippi	1.000
						Alabama – Tennessee	.280
						Alabama – Kentucky	1.000
						Mississippi – Tennessee	1.000
						Mississippi – Kentucky	1.000
						Tennessee – Kentucky	.031
Domain 5	School Wide Services to Promote Learning	7.85	3	.049	.123	Alabama – Mississippi	1.000
						Alabama – Tennessee	.134
						Alabama – Kentucky	1.000
						Mississippi – Tennessee	1.000
						Mississippi – Kentucky	1.000
						Tennessee – Kentucky	.169
Domain 8	Participating in meetings focused on the	9.31	3	.025	.145	Alabama – Mississippi	1.000
						Alabama – Tennessee	1.000
						Alabama – Kentucky	.055

development of IEPs	Mississippi – Tennessee	1.000
	Mississippi – Kentucky	1.000
	Tennessee – Kentucky	.061

Note. Significance values were adjusted by the Bonferroni correction for multiple tests.

Domain 2. Within practices related to the Consultation and Collaboration domain, a significant difference existed across the four states in the time needed consulting and collaborating with a team responsible for developing and evaluating students in need of instructional supports, $c^2(3, n = 65) = 7.89, p = .048$. However, differences between the state pairwise comparisons were not statistically significant after the Bonferroni correction. Despite not being statistically significant at the .05 level, school psychologists in Kentucky ($Mdn = 5$) reported a higher median value of needed practice in this area than school psychologists in Tennessee ($Mdn = 3$). A significant difference also existed across the four states in the time needed consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs, $c^2(3, n = 65) = 9.96, p = .019$. School psychologists in Kentucky ($Mdn = 5$) reported a statistically significant ($p = .031$) higher median value of needed practice in this area than school psychologists in Tennessee ($Mdn = 3$).

Domain 5. A significant difference existed in time needed spent engaged in the School-Wide Services to Promote Learning domain across the four states, $c^2(3, n = 64) = 7.85, p = .049$. Although not significant after the Bonferroni correction, Kentucky school psychologists reported a higher median rating ($Mdn = 1.75$) for time needed engaged in school-wide services to promote learning than school psychologists in Tennessee ($p = .169$), who reported a median rating of 1.5. Tennessee school psychologists reported a higher median rating ($Mdn = 1.5$) for time needed in school-wide services to promote learning than school psychologists in Alabama ($p = .134$), who reported a median rating of 1.13. A significant difference existed across the four states in the time needed for consulting and collaborating with a team regarding developing and evaluating

system-level or school-wide programs, $c^2(3, n = 65) = 9.96, p = .019$. School psychologists in Kentucky ($Mdn = 5$) reported a statistically significant ($p = .031$) higher median value of needed practice in this area than school psychologists in Tennessee ($Mdn = 3$).

Domain 8. Within practices related to the Diversity in Development and Learning domain, a significant difference existed across the four states in the time needed to participate in meetings focused on the development of IEPs, $c^2(3, n = 65) = 9.31, p = .025$. However, differences between the state pairwise comparisons were not statistically significant after the Bonferroni correction. Despite not being statistically significant, school psychologists in Kentucky ($Mdn = 5$) reported a higher median value of needed practice in this area than school psychologists in Tennessee ($p = .061$) and Alabama ($p = .055$), who both reported median ratings of 3.

Domain 9. Within practices related to the Research and Program Evaluation domain, a significant difference existed across the four states in the time needed for consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs, $c^2(3, n = 65) = 9.96, p = .019$. School psychologists in Kentucky ($Mdn = 5$) reported a statistically significant ($p = .031$) higher median value of needed practice in this area than school psychologists in Tennessee ($Mdn = 3$).

Community Setting Differences

Data were analyzed using independent samples Kruskal-Wallis tests to determine whether the geographical setting of participants' practice in had any effect on their report of actual practices during a typical school year and their perceived needed practices. Eight items of participants' actual practices were significantly affected by geographic location and are reported in Table 12. Median ratings for each community setting were reported for actual practices and

needed practices in Appendix I. No perceived needed practices were significantly affected by geographic setting. This finding answered the question that school psychologists in rural settings do not perceive certain practices and service domains as more needed compared to school psychologists practicing in urban or suburban settings.

Table 12
Kruskal-Wallis Results for Actual Practices of School Psychologists in ESC
Compared by Community Setting

Domain	Item	Kruskal-Wallis				Dunn-Bonferroni	
		<i>H</i>	<i>df</i>	<i>p</i>	Effect Size (ϵ^2)	Pairwise Comparison	<i>p</i>
Domain 1	Collecting, analyzing, and interpreting data to develop and evaluate system-level or school-wide programs	10.408	3	.015	.163	Suburban – Rural	1.000
						Suburban – Other	1.000
						Suburban – Urban	.011
						Rural – Other	1.000
						Rural – Urban	.061
						Other - Urban	.715
						Domain 2	Consultation with general education staff
Suburban – Other	.534						
Suburban – Urban	.153						
Rural – Other	.709						
Rural – Urban	.049						
Other - Urban	.087						
Domain 3	Interventions and Instructional Support to Develop Academic Skills	7.820	3	.050	.122		
						Suburban – Other	1.000
						Suburban – Urban	.045
						Rural – Other	1.000
						Rural – Urban	.107
						Other - Urban	1.000
						Domain 3	Direct academic or social skill intervention
Suburban – Other	1.000						
Suburban – Urban	.009						
Rural – Other	1.000						

Domain	Item	Kruskal-Wallis			Dunn-Bonferroni		
		<i>H</i>	<i>df</i>	<i>p</i>	Effect Size (ϵ^2)	Pairwise Comparison	<i>p</i>
						Rural – Urban	.091
						Other - Urban	.761
	Providing interventions and instructional support to develop academic skills	8.548	3	.036	.134	Suburban – Rural	1.000
						Suburban – Other	1.000
						Suburban – Urban	.034
						Rural – Other	1.000
						Rural – Urban	.134
						Other - Urban	.686
	School Wide Services to Promote Learning	10.956	3	.012	.171	Suburban – Rural	1.000
						Suburban – Other	1.000
						Suburban – Urban	.007
						Rural – Other	1.000
						Rural – Urban	.070
						Other - Urban	.950
	Collecting, analyzing, and interpreting data to develop and evaluate system-level or school-wide programs	10.408	3	.015	.163	Suburban – Rural	1.000
						Suburban – Other	1.000
						Suburban – Urban	.011
						Rural – Other	1.000
						Rural – Urban	.061
						Other - Urban	.715
Domain 5	Developing and implementing school-wide strategies to promote safe and supportive learning environments and student wellness	11.720	3	.008	.183	Suburban – Rural	1.000
						Suburban – Other	1.000
						Suburban – Urban	.007
						Rural – Other	1.000
						Rural – Urban	.024
						Other - Urban	.520
	District level planning and collaboration	10.705	3	.013	.167	Suburban – Rural	.515
						Suburban – Other	1.000
						Suburban – Urban	.008
						Rural – Other	1.000
						Rural – Urban	.311
						Other - Urban	1.000
Domain 7	Family-School Collaboration Services	10.678	3	.014	.167	Suburban – Rural	1.000
						Suburban – Other	1.000
						Suburban – Urban	.021
						Rural – Other	1.000

Domain	Item	Kruskal-Wallis				Dunn-Bonferroni	
		<i>H</i>	<i>df</i>	<i>p</i>	Effect Size (ϵ^2)	Pairwise Comparison	<i>p</i>
Domain 8	Participating in evaluations or meetings focused on the development of 504 plans	12.317	3	.006	.192	Rural – Urban	.026
						Other - Urban	.401
						Suburban – Rural	.159
						Suburban – Other	1.000
						Suburban – Urban	.015
						Rural – Other	.811
						Rural – Urban	.939
						Other - Urban	.309
Domain 9	Research and Program Evaluation	10.815	3	.013	.169	Suburban – Rural	1.000
						Suburban – Other	1.000
						Suburban – Urban	.018
						Rural – Other	1.000
						Rural – Urban	.051
						Other - Urban	.253

Note. Significance values were adjusted by the Bonferroni correction for multiple tests.

Domain 1. Within practices related to the Data-Based Decision-Making and Accountability domain, a significant difference existed in actual time engaged in collecting, analyzing, and interpreting data to develop and evaluate system-level or school-wide programs across the four different community settings, $c^2(3, n = 65) = 10.408, p = .015$. School psychologists in urban settings ($Mdn = 3$) reported significantly higher median ratings than school psychologists in suburban settings ($p = .011$) who recorded a median rating of 2. Although not significant after Bonferroni corrections ($p = .061$), school psychologists in urban settings also reported higher median ratings ($Mdn = 3$) than school psychologists in rural settings ($Mdn = 2.50$) in this activity.

Domain 2. Within practices related to the Consultation and Collaboration domain, a significant difference existed in actual time engaged in consultation with general education staff across the four different community settings, $c^2(3, n = 65) = 10.393, p = .016$. School psychologists in urban settings ($Mdn = 3.5$) reported significantly higher median ratings than school psychologists in rural settings ($p = .049$) who recorded a median rating of 3. Although not

significant after Bonferroni corrections ($p = .087$), school psychologists in urban settings also reported higher median ratings ($Mdn = 3.5$) than school psychologists in other settings ($Mdn = 2$) in consulting with general education staff.

A significant difference also existed in actual time engaged consultation with families and parents across the four different community settings, $c^2(3, n = 64) = 10.559, p = .019$.

School psychologists in urban settings ($Mdn = 3$) reported significantly higher median ratings than school psychologists in rural settings ($p = 0.11$), who reported a median rating of 2.

Although not significant after Bonferroni corrections ($p = .053$), school psychologists in urban settings also reported higher median ratings ($Mdn = 3$) than school psychologists in suburban settings ($Mdn = 2$).

Domain 3. A significant difference existed in actual time engaged in the Intervention and Instructional Support to Develop Academic Skills domain across the four community settings, $c^2(3, n = 65) = 7.820, p = .050$. School psychologists in urban areas reported significantly higher median ratings ($Mdn = 2.73$) than school psychologists in suburban ($Mdn = 1.67, p = .045$) and rural areas ($Mdn = 1.83, p = .107$).

Within Domain 3, a significant difference existed in actual time engaged in direct academic or social skill intervention across the four different community settings, $c^2(3, n = 65) = 10.610, p = .014$. School psychologists in urban settings ($Mdn = 2$) reported significantly higher median ratings than school psychologists in suburban settings ($p = .009$) who recorded a median rating of 1. Although not significant after Bonferroni corrections ($p = .091$), school psychologists in urban settings also reported higher median ratings ($Mdn = 2$) than school psychologists in rural settings ($Mdn = 1$).

A significant difference also existed in actual time engaged in providing interventions and instructional support to develop academic skills, $c^2(3, n = 65) = 8.548, p = .036$. School psychologists in urban settings ($Mdn = 2$) reported significantly higher median ratings than school psychologists in suburban settings ($p = .034$) who recorded a median rating of 1. Although not significant after Bonferroni corrections ($p = .134$), school psychologists in urban settings also reported higher median ratings ($Mdn = 2$) than school psychologists in rural settings ($Mdn = 1$).

Domain 5. A significant difference existed in actual time engaged in the School-Wide Services to Promote Learning domain across the four community settings, $c^2(3, n = 64) = 10.956, p = .012$. Within the community settings, school psychologists in urban areas reported significantly higher median ratings ($Mdn = 2.75$) than school psychologists in suburban areas ($p = .007$), who reported a median rating of 1.25. Urban school psychologists also reported higher median ratings ($p = 2.75$), albeit not statistically significant, than school psychologists in rural areas ($p = .070$), who reported a median rating of 1.5.

Within practices related to school-wide services, a significant difference existed in actual time engaged in district level planning and collaboration across the four different community settings, $c^2(3, n = 65) = 10.705, p = .013$. School psychologists in urban settings ($Mdn = 2.5$) reported significantly higher median ratings than school psychologists in suburban settings ($p = .008$) who recorded a median rating of 1.

A significant difference also existed in actual time engaged in collecting, analyzing, and interpreting data to develop and evaluate system-level or school-wide programs across the four different community settings, $c^2(3, n = 65) = 10.408, p = .015$. School psychologists in urban settings ($Mdn = 2.5$) reported significantly higher median ratings than school psychologists in

suburban settings ($p = .011$) who recorded a median rating of 1. Although not significant after Bonferroni corrections ($p = .061$), school psychologists in urban settings also reported higher median ratings ($Mdn = 2.5$) than school psychologists in rural settings ($Mdn = 1$).

Also within Domain 5, a significant difference existed in actual time engaged in developing and implementing school-wide strategies to promote safe and supportive learning environments and student wellness across the four different community settings, $c^2(3, n = 65) = 11.720, p = .008$. School psychologists in urban settings ($Mdn = 3$) reported significantly higher median ratings than school psychologists in suburban settings ($p = .007$) who reported a median rating of 1. They also reported significantly ($p = .024$) higher median ratings than school psychologists in rural settings ($Mdn = 1$), who also reported a median rating of 1.

Domain 7. A significant difference existed in actual time engaged in the Family-School Collaboration Services domain across the four community settings, $c^2(3, n = 64) = 10.678, p = .014$. Within the community settings, school psychologists in urban areas reported significantly higher median ratings ($Mdn = 3$) than school psychologists in suburban areas ($p = .021$) and rural areas ($p = .026$), who both reported median ratings of 2.

Domain 8. Within practices related to the Diversity in Development and Learning domain, a significant difference existed in actual time engaged in participating in evaluations or meetings focused on the development of 504 plans across the four different community settings, $c^2(3, n = 65) = 12.317, p = .006$. School psychologists in urban settings ($Mdn = 3$) reported significantly higher median ratings than school psychologists in suburban settings ($p = .015$) who recorded a median rating of 2. Although not significant after Bonferroni corrections ($p = .159$), school psychologists in rural settings also reported higher median ratings ($Mdn = 3$) than school psychologists in suburban settings ($Mdn = 2$).

Domain 9. A significant difference existed in actual time engaged in the Research and Program Evaluation domain across the four community settings, $c^2(3, n = 65) = 10.815, p = .013$. Within the community settings, school psychologists in urban areas reported significantly higher median ratings ($Mdn = 2.25$) than school psychologists in suburban areas ($p = .018$) and higher median ratings than school psychologists in rural areas ($p = .051$), who both reported median ratings of 1.25.

Summary of Results

Descriptive statistics were reported for demographic variables of the participants in this study along with a variety of workplace characteristics and factors. School psychologists in the ESC division identified as young, white females with five years or less experience in the field, and most participants held a specialist-level degree in school psychology along with the NCSP credential. Most school psychologists in this study work in community settings that were categorized as either suburban, rural, or some combination of the two. Most work on a 10-month contract. Most school psychologists serve two to three schools with a median school psychologist to student ratio of 1:1600. Regarding system-level variables, most school psychologists in this study reported have an RTI framework in their district and having other SBMH providers (i.e., school counselors, school social workers, and behavior specialists) in their district. The average number of school psychologists employed full-time in participants' districts was roughly 16 with a median of 7.5. School psychologists practicing in Tennessee reported more full-time school psychologists on staff in their district with an average of roughly 26 and a median of 12. Overall, school psychologists in the ESC division reported completing 30 initial evaluations, 48 reevaluations, and attending 125 meetings for special education purposes during a typical year. However, school psychologists in Alabama reported substantially higher numbers

in all three areas with medians of 50 initial evaluations, 72 reevaluations, and 188 special education meetings in a typical year. The majority of school psychologists in the ESC division did not report providing direct academic or social-emotional/behavioral intervention services to individual students or groups of students in a typical year, but a higher percentage of school psychologists in Kentucky reported providing these services than the percentage of school psychologists in other states. The majority of school psychologists in the ESC division also reported providing one to four in-service trainings or presentations during a typical school year but not parent presentations or trainings.

Research Question 1

Descriptive statistics for Research Question 1 revealed that school psychologists in the ESC division rated themselves as spending most of their time engaged in practices that fall under Domain 1 (*Mdn* = 4.00), 2 (*Mdn* = 3.67), and 8 (*Mdn* = 3.00) of the NASP Practice Model, with a scale range of 1 to 7. However, school psychologists' median ratings of actual engagement for every other domain was less than or equal to 2, indicating no to little involvement in these areas. This suggested that school psychologists in the ESC division spend most of their practice engaged in activities that permeate all school psychological services (e.g., data-based decision-making and accountability and consultation and collaboration) as well as the foundational services related to diversity in development and learning, but they engaged in little to no involvement in direct and indirect student-level or system-level services (e.g., interventions and instructional support for academics and mental health services; school-wide services; preventive and responsive services; family-school collaboration services) or other foundational services (e.g., program evaluation and legal, ethical and professional practices).

Research Question 2

Research Question 2 was also answered using descriptive statistics and analyzed which school psychological practices and domains of a comprehensive service delivery model are perceived as most needed by school psychologists in the ESC division. Descriptive statistics for Research Question 2 revealed that school psychologists in the ESC division rated practices across virtually all domains of the NASP Practice Model (NASP, 2020c) as being most needed with median ratings between 3 and 4.25 for all but one domain (Domain 10, *Mdn* = 2.69). This suggested that school psychologists in the ESC division recognize a more balanced distribution of their services as needed to best serve their students, which was in alignment with the NASP Practice Model (NASP, 2020c).

Research Question 3

Research Question 3 analyzed the differences between median ratings of actual and needed practices and activities within each of the 10 NASP Practice Domains. At the domain level, results showed higher median ratings for needed practices all domain areas, with discrepancies between actual and needed practices being statistically significant for Domains 1, 2, 3, 6, 7, and 10. Preventive and response services (Domain 6) showed the biggest discrepancy between actual and needed practice at the domain level.

At the individual activity level, results showed the largest discrepancies between actual and needed engagement (3-point difference) in (1) collecting, analyzing, and interpreting data to develop and evaluate system-level or school-wide programs ($p = .503$) and (2) developing and implementing school-wide strategies to promote safe and supportive learning environments and student wellness ($p = .316$). Neither of these discrepancies were statistically significant. However, most other activities showed statistically significant increases in median ratings

between actual and needed time and engagement to best serve students, except for median ratings for special education related activities (e.g., participation in meetings for IEP development; attending referral, eligibility, and IEP meetings; conducting individual evaluations for special education eligibility; and assessment-related activities) which showed statistically significant decreases in time needed versus actual time spent in each.

Research Question 4

Research Question 4 looked at the factors that affect the differences between school psychologists' actual practice and services and their perceptions of needed practices and services, with particular focus on the impact of geographical setting. At the state-level, school psychologists in Kentucky reported higher median ratings than their colleagues practicing in Alabama and Tennessee in their actual time engaged in counseling, crisis intervention, and school crisis prevention and response activities. They also reported higher median ratings for actual time spent consulting and collaborating for the development and evaluating of system-level and school-wide programs than their Alabama counterparts. School psychologists in Alabama reported lower median ratings, and therefore less time engaged in a variety of meetings (intervention and team planning, meetings for IEP development, and evaluation and meetings for development of 504 plans) and overall practice in Domain 8 of the NASP Practice Model than school psychologists in Kentucky and Tennessee. School psychologists in Alabama also reported less time spent in non-special education evaluations than school psychologists in Tennessee. On the contrary, Alabama and Kentucky school psychologists reported higher median ratings for time needed in meetings related to the development of IEPs than school psychologists in Tennessee. The difference between the perceived ratings of needed practice in Domain 5 as well as consultation and collaboration to develop instruction supports and develop and evaluate

system-level or school-wide programs was statistically significant for school psychologists in Kentucky and Tennessee, with those in Kentucky reporting higher median ratings.

At the community setting level, school psychologists in suburban and rural settings reported lower median levels of actual time spent across a variety of practices and service domains than school psychologists in urban settings. For example, urban school psychologists reported higher median levels for typical practice within Domains 5, 7, and 9 of the NASP Practice Model. More specifically, urban school psychologists had higher median ratings than rural and suburban school psychologists for time spent in consultation with general education staff and families, providing direct academic or social skill interventions and interventions and instructional support to develop academic skills, district level planning and collaboration, and using data-based decision-making processes to develop and evaluate school-wide programs and strategies. The only activity in which school psychologists in rural areas reported a statistically significant higher median rating of actual time engaged school psychologists in other settings was for evaluation or meetings for 504 plan development. Rural school psychologists, along with urban school psychologists, reported a median rating of 3, compared to suburban school psychologists' median rating of 2.

No statistically significant differences existed between the different settings (e.g., urban, suburban, rural, or other) for any variables measuring the perceived needed practices for any specific activity or domain of practice. Therefore, the answer to the second part of Research Question 4 was that school psychologists practicing in rural settings did not perceive certain practices and service domains as more needed than others compared to school psychologists in urban or suburban settings.

CHAPTER V

DISCUSSION AND CONCLUSIONS

Introduction

Childhood mental health issues have increased over the past several decades, which has raised national awareness of these needs (U.S. Public Health Service, 2000). However, nearly one-half of children with a mental health disorder in the United States do not receive the mental health care they need (Whitney & Peterson, 2019). With a shortage of mental health providers as a major barrier to care (Tyler et al., 2017), school-based mental health professionals provide a solution to this problem, as schools are a natural setting for children to receive mental and behavioral health supports (Evans, 1999; Hellmuth, 2018).

School psychologists offer a unique skillset to help meet the unaddressed mental health needs of today's youth (Splett et al., 2013; Splett & Maras, 2011). Although the field of school psychology originated with a focus on conducting psychoeducational evaluations to identify students who have disabilities and require special education services (Merrell et al., 2006), it has evolved toward a comprehensive model with a focus on preventive services for all students (NASP, 2020c). Despite this shift, national surveys indicate that assessment-related activities continue to consume the majority of school psychologists' time (Benson et al., 2019; Lewis et al., 2008; McNamara et al., 2019; Sotelo-Dynega & Dixon, 2014; Stoiber & Vanderwood, 2008), and school psychologists' actual roles and practices are discrepant from what is recommended by the NASP Practice Model (2020c).

Given the growing demand for school-based mental health provision and the expertise of school psychologists to help meet this demand through shifts toward more comprehensive service delivery models, an examination of school psychologists' current actual roles and services is warranted.

Statement of Purpose

Many national studies have examined the roles and activities of school psychologists (Bramlett et al., 2002; Curtis et al., 1999; Curtis et al., 2002; Filter et al., 2013; Lewis et al., 2008; Nastasi et al., 1998; Reschly, 2000; Stoiber & Vanderwood, 2008; Walcott & Hyson, 2018). Every five years over the past three decades, NASP has collected demographic and professional practice data through surveys of its members (McNamara et al., 2019), and numerous studies have explored discrepancies between preferred, ideal, and actual practices of school psychologists (Agresta, 2004; Farling & Hoedt, 1971; Filter et al., 2013; Gilman & Medway, 2007; Hagemeyer et al., 1998; Hosp & Reschly, 2013; Meacham & Peckham, 1978; McNamara et al., 2019; Peterson et al., 1998; Reschly & Wilson, 1995; Watkins et al., 2001; Worrell et al., 2006) as well as facilitators and barriers to those preferred practices (Castillo et al., 2016; see also Atkinson et al., 2014; Graves et al., 2014; Hicks et al., 2014; Newman et al., 2018).

However, only a handful of studies have explored regional or state-specific practices of school psychologists (Bahr et al., 2017; DeSimone, 1998; Gilman & Gabriel, 2004; Hosp & Reschly, 2002; Sheltraw, 2013). The most notable of these studies, Hosp and Reschly (2002), found significant variations by United States census regions in school psychological practices with lower salaries, higher ratios, and more traditional role functions in the East South Central (ESC) and South Atlantic regions than in other census regions. No study to date has examined

school psychological practices at the state level for the ESC census division. Thus, this study aimed to extend the research of Hosp and Reschly (2002) as implicated by their findings and fill a relevant gap in the literature. The main purpose of this study was to explore the current roles and practices of school psychologists working in the ESC census division of the United States with a specific emphasis on examining and comparing school psychologists' practices in each of the four states in the ESC division (e.g., Alabama, Kentucky, Mississippi, and Tennessee) as well as their alignment to the NASP Practice Model (NASP, 2020c). Four research questions were posed:

1. To what extent are school psychologists in the ESC division engaging in a comprehensive service delivery model as measured by the amount of time engaged in a broad range of commonly cited school psychological practices?
2. Which school psychological practices and domains of a comprehensive service delivery model do school psychologists in the ESC perceive as most needed in their current setting?
3. What are the differences between school psychologists' actual practices and services and their perceptions of needed practices and services?
4. What factors affect the relationship between school psychologists' actual practice and services and their perceptions of needed practices and services?
 - a. Does geographical setting affect the relationship between actual school psychological practice/service and perceptions of needed school psychological practices/services?

- b. Do school psychologists practicing in rural settings perceive certain practices and service domains as more needed than others compared to school psychologists practicing in urban or suburban settings?

Methodology

This study made inferences about school psychologists working full-time in school-based settings in the ESC division of the United States. Participants were asked to rate their level of engagement in specific practices and activities during a typical school year on a Likert scale of 1 to 7 (1=never/none at all, 7=almost always/all the time) as well as their perceptions of needed engagement in those same practices and activities to best serve the students in their schools. An adapted and reproduced version of the NASP Membership Survey (Walcott & Hyson, 2018) was distributed to participants electronically using an online Qualtrics survey which also included a demographic questionnaire. A total of 65 school psychologists from the ESC division completed the online survey for this study.

Discussion of Results

This section provides a discussion of the results from this study in light of existing literature related to discrepancies and trends in school psychologists' practices. Specifically, this section discusses consistencies with the literature regarding organizational factors and relation comprehensive school psychological and mental health services. Finally, a discussion of future directions for research and implications for the field of school psychology within the ESC division is provided.

School Psychologists in the ESC Division

Similar to national findings (Walcott & Hyson, 2018), the majority of school psychologists in the ESC division are young to middle-aged, and identify as white, females who

hold a specialist-level degree in school psychology along with the NCSP credential and 10 years or fewer years of experience in school psychology. However, the average school psychologist practicing in the ESC division is younger and less experienced than the average school psychologist nationally. The median annual salary for school psychologists in the ESC division was between \$50,000 and \$74,999, which is consistent with the most recent national median salary (Walcott & Hyson, 2018). The median school psychologist-to-student ratio for the ESC division was 1:1600, a figure higher than the most recently cited national average (Walcott & Hyson, 2018) and over twice the ratio recommended by the NASP Practice Model (NASP, 2020c). Nearly 70% of school psychologists in the ESC division were assigned to two to three schools with almost 17% reporting being assigned to five or more schools. In Alabama, almost 43% of school psychologists, were assigned to five or more schools. Most school psychologists in this study worked in community settings that were categorized as either suburban, rural, or some combination of the two, with the highest percentage of any category reporting working in rural communities (43.1%). Most school psychologists in this study were employed on a 10-month contract.

Regarding system-level variables, most school psychologists in this study reported having an RTI framework in their district and having other SBMH providers (i.e., school counselors, school social workers, and behavior specialists) in their district. The average number of school psychologists employed full-time in participants' districts was roughly 16 with a median of 7.5. School psychologists practicing in Tennessee reported more full-time school psychologists on staff in their district with an average of roughly 26 and a median of 12. Overall, school psychologists in the ESC division reported completing 30 initial evaluations, 48 reevaluations, and attending 125 meetings for special education purposes during a typical year.

However, school psychologists in Alabama reported substantially higher numbers in all three areas with medians of 50 initial evaluations, 72 reevaluations, and 188 special education meetings in a typical year. The majority of school psychologists in the ESC division did not report providing direct academic or social-emotional/behavioral intervention services to individual students or groups of students in a typical year, but a higher percentage of school psychologists in Kentucky reported providing these services than the percentage of school psychologists in other states. The majority of school psychologists in the ESC division also reported providing one to four in-service trainings or presentations during a typical school year but not parent presentations or trainings.

Actual and Perceived Practices of School Psychologists in the ESC Division

The first major purpose of the current study was to better understand the extent to which school psychologists in the ESC division were engaged in a comprehensive service delivery model. In this study, activities related to assessment and special education evaluations accounted for the majority of school psychologists' practice in the ESC division. This finding is consistent with numerous previous studies (Benson et al., 2019; Lewis et al., 2008; McNamara et al., 2019; Sotelo-Dynega & Dixon, 2014; Stoiber & Vanderwood, 2008), which have found that school psychologists continue to spend most of their time engaged in assessment practices related to special education services. This study was similar to Hosp and Reschly's (2002) findings, in which they noted that school psychologists in the ESC division spent more time than school psychologists in any other census division engaged in activities related to special education evaluations.

Given the high level of engagement in assessment- and evaluation-related activities, it is not surprising that school psychologists in the ESC division reported the highest level of

engagement within Domain 1 (Data-Based Decision-Making and Accountability) of the NASP Practice Model (NASP, 2020c), indicating that about one-half of their time was spent in related activities. The domains with the next highest levels of engagement were Domains 2 (Consultation and Collaboration) and 8 (Diversity in Development and Learning) which included special education-related activities such as participation in referral, eligibility, and IEP meetings. However, median ratings for typical engagement in nearly all other activities and domains were ranked from *no* to *rare* involvement, indicating that as a whole, school psychologists in the ESC division do not typically engage in a comprehensive service delivery model. This finding is similar to Hosp & Reschly's (2002) conclusions about school psychology practices in the ESC division, which indicated a greater focus on traditional assessment roles and models of service delivery. The findings from this study are also parallel to Sheltraw's (2013) findings that school psychologists' practices in West Virginia are more aligned with traditional assessment rather than the NASP Practice Model (NASP, 2020c). However, the results from this study do not reflect McNamara et al.'s (2019) most recent national survey of school psychologists which found a trend of general engagement in a broad range of school psychology services as set forth in the NASP Practice Model (NASP, 2020c). While the field has seen incremental, longitudinal changes in role expansion of school psychologists (McNamara et al., 2019; Reschly, 2000), practices and roles of school psychologists in the ESC division as a whole have remained stagnant despite increased mental health needs of children over the past 20 years (U.S. Public Health Service, 2000; Whitney & Peterson, 2019).

The second major purpose of this study was to answer which school psychological practices and domains of a comprehensive service delivery model are perceived as most needed by school psychologists in the ESC division. Despite the imbalance of time typically spent

engaged in the 10 domains of the NASP Practice Model (NASP, 2020c), school psychologists in the ESC division rated practices across virtually all domains of the NASP Practice Model as being most needed with median ratings falling closer to the midpoint rating of 4 (e.g., *about half the time*), which is more aligned with the NASP Practice Model (NASP, 2020c) than their typical practices. This suggests that school psychologists in the ESC division recognized there is a gap between their actual services and those needed to best serve their students. This finding echoes previous studies of school psychologists' roles and practices (Bahr et al., 2017; Benson et al., 2019; Filter et al., 2013; Gilman & Gabriel, 2004; Lewis et al., 2008; McNamara et al., 2019; Newman et al., 2018; Sotelo-Dynega & Dixon, 2014; Stoiber & Vanderwood, 2008; Walcott & Hyson, 2018), including Hosp and Reschly's (2002) findings that school psychologists in the ESC division believe they should be engaging in various activities other than assessment-related ones.

Discrepancies Between Actual and Needed Practices

The third major purpose of this study sought to determine the differences between school psychologists' actual practices and services and their perceptions of needed practices and services. The discrepancy between actual and needed practices of school psychologists in the ESC division was significant across the majority of domains of the NASP Practice Model (NASP, 2020c). ESC school psychologists reported statistically significant higher levels of needed engagement versus actual engagement in nearly all activities with the exception of special education related activities (e.g., attending referral, eligibility, and IEP meetings; conducting individual evaluations for special education eligibility; and assessment-related activities) which showed statistically significant decreases in time needed versus actual time spent in each.

Previous studies have indicated that consultation is more valued or preferred over assessment-related activities (Bahr et al., 2017; Filter et al., 2013; Stoiber & Vanderwood, 2008). While results from this study did not indicate a preference or greater degree of time needed in consultation over assessment-related activities, arguably the results indicate that school psychologists in the ESC division value consultation and collaboration services by virtue of their reported need in this area being similar to their reported need of data-based decision making services. Specifically, school psychologists reported that one-half of their time is needed to engage in the following Consultation and Collaboration domain practices: consultation with general education staff, participating in intervention planning and team meetings, consulting with a team to develop instruction supports, and to develop and evaluate school-wide and system-level programs. These practices are deemed valued and desired by recipients of those services (Farrell et al., 2005; Watkins et al., 2001).

Geographical Setting

The final purpose of this study was to determine the impact geographical setting had on school psychologists' actual practice and services and their perceptions of needed practices and services, which was examined both at the state- and community-levels. Although results from this study indicated that as a whole ESC school psychologists' typical practice does not follow a comprehensive service delivery model, they illuminated discrepancies between the states.

State-Level Differences

For instance, school psychologists in Kentucky spend more of their practice engaged in school-based mental health services such as counseling, crisis prevention and response activities, and crisis intervention, than the other states. Interestingly, a smaller percentage of school psychologists in Kentucky reported having behavior specialists (26.3%) than did school

psychologists in Alabama (85.7%) or Tennessee (67.6%), and fewer (52.6%) also reported having school social workers compared to Tennessee (74.2%). Having a narrower range of school-based mental health providers may impact the breadth of services school psychologists in Kentucky provide. On the other hand, having system-level and school-wide initiatives that target mental and behavioral health may be contributing to this difference between the states. Specifically, about 90% of school psychologists in Kentucky reported having PBIS initiatives compared to roughly one-third of school psychologists in Alabama or Tennessee, and almost one-half reported having SEL programs compared to about one-fourth of school psychologists in Tennessee and none in Alabama. The framework of systemic initiatives such as PBIS and SEL programs lends itself to comprehensive and integrated school psychological services (NASP, 2020c).

On the other end of the spectrum, the practices of school psychologists in Alabama appear more traditional and limited in scope. School psychologists in Alabama reported less time engaged in consultation and collaboration practices, particularly related to systemic practice and team meetings related to interventions and educational plans than school psychologists in Kentucky or Tennessee. Additionally, school psychologists in Alabama reported less time than Tennessee school psychologists in data-based decision-making for reasons other than special education, and they reported a much higher number of special education-related evaluations and meetings than those in Kentucky or Tennessee.

A couple of factors could be contributing these differences. First, the ratio of school psychologists to students in Alabama (1:1925-2566) is greater than in Kentucky (1:1375-2100) or Tennessee (1:1600). To add, almost one-half of school psychologists in Alabama are assigned to five or more schools compared to less than 10% of school psychologists in Kentucky or

Tennessee. Student-to-practitioner ratios are directly linked to time as a resource as lower ratios afford more time to engage in either more comprehensive services or more manageable evaluation caseloads, and higher ratios are associated with greater levels of assessment activities (McNamara et al., 2019) and less time for SBMH services (Eklund et al., 2017). The number of school psychologists in Alabama are marginal compared to Tennessee and Kentucky when comparing the number of active NCSPs in each state (NASP, 2020a). This fact alone may best account for discrepancies between school psychological practices in Alabama and its fellow ESC states.

Second, following the same rationale that system-wide initiatives support Kentucky's school psychologists' provision of comprehensive services, a lack of these same organizational supports may be contributing to Alabama's more restricted practices. While almost two-thirds of Alabamian school psychologists reported having RTI frameworks in their district or schools, just over one-fourth reported having PBIS systems in place and virtually no SEL programs or MTSS initiatives. Comparatively, nearly all of school psychologists in Kentucky (79%) and Tennessee (94%) reported having RTI initiatives. The aim of RTI is to target students' needs up front focusing on prevention and early intervention, rather than at the point of special education evaluation and services (National Center for Learning Disabilities, n.d.). Traditional roles of school psychologists as special education evaluators inhibit expansion into more comprehensive roles (Canter, 2006). However, when RTI models are implemented to fidelity, school psychologists are able to expand their services into more prevention and mental health arenas as a result of reallocating their time and efforts.

Community Level Differences

At the community setting level, school psychologists in suburban and rural settings reported lower median levels of actual time spent across a variety of practices and service domains than school psychologists in urban settings. For example, urban school psychologists had higher median ratings than rural and suburban school psychologists for time spent in a variety of non-assessment related activities. Specifically, the activities were: consultation with general education staff and families, providing direct academic or social skill interventions and interventions and instructional support to develop academic skills, district level planning and collaboration, and using data-based decision-making processes to develop and evaluate school-wide programs and strategies. The only activity in which school psychologists in rural areas reported a statistically significant higher median rating of actual time engaged school psychologists in other settings was for evaluation or meetings for 504 plan development, which are practices that are more aligned with traditional special-education focused roles. This result was consistent with findings from nearly 20 years ago (i.e., school psychologists working in rural districts or districts with higher student-to-psychologist ratios reported greater involvement in services focused on special education activities [e.g., administering assessments, writing reports, and conducting meetings as part of psychoeducational evaluations] as offered by Curtis et al. (2002). Despite the difference in actual practices, school psychologists in rural settings in the ESC division did not identify any particular activity or service area as being more needed than those practicing in urban or suburban areas.

Limitations of the Study

Several factors may have served as limitations to this study involving the sample and the impact of the COVID-19 pandemic. First, although recruitment for this study was achieved by

convenience sample, there is a strong possibility that snowball sampling may have occurred given the networking nature of the social media platform utilized to disseminate the survey. As a result, the participants in this study may represent only a subset of the school psychologists in the ESC. Similarly, the school psychologists in this study were less experienced and younger than the national average, which could be the result of being recruited electronically through convenience rather than through a random selection process. In addition, only one school psychologist from Mississippi participated in the study. With the lack of representation from one of the states in the ESC division, the results of this study are likely not indicative of ESC school psychologists' practices as a whole.

In addition to potential limitations from the sample, disruptions and factors arising from the COVID-19 pandemic may have limited results of this study. First, participants to this study were school psychologists who were already in short supply and operating at ratios well above the national recommendation before the pandemic. Schools closed in March 2020, as a result of state of emergencies declared in the states comprising the ESC division. This led to backlogs of special education evaluations, increase in mental health problems for students, and tasks of problem-solving and acquiring new skills and adapting to virtual platforms during the remainder of the 2019-2020 school year. Some pandemic issues also carried over into the current academic year, 2020-2021. Professionals in education, including school psychologists, have been chronically fatigued from the impact of COVID-19 on education. The first break many school psychologists had during the current school year may have likely been during Thanksgiving and winter holiday breaks, which also coincided with the survey window. It is possible and likely that school psychologists were less inclined to participate in the study given the current demands on their time, energy, and resources.

Finally, answers to survey items may have been biased or influenced by the current state of schools. Survey items asked participants to rate their practices and services in the context of a typical school year. The last fully completed typical school year was the 2018-2019 academic year and may not reflect current practices for school psychologists in the ESC division. Similarly, services that are needed to best serve students may be temporarily different and unique because of the impact of COVID-19.

Implications of the Study for Future Research

Given the results of the current study, several considerations for future research have emerged. First, the present study should be replicated after restrictions due the global COVID-19 pandemic are lifted and school and life operations return to stable conditions. In addition, future studies should continue to examine the geographical differences in school psychological practices in the ESC division, particularly with a larger sample size, especially for Alabama and Mississippi. Thirty percent of the total participants did not complete the survey for this study. A larger sample size increases the likelihood that the sample represents the population and reduces the standard error thus increasing the likelihood of revealing an effect (Adams & Lawrence, 2019).

The current study also utilized an adapted version of the NASP Membership Survey (Walcott & Hyson, 2018). Future studies should attempt to identify additional activities, roles, and practices of school psychologists that may better capture the comprehensive service delivery model. For example, Filter et al. (2013) examined school psychologists' practices at a more detailed level, measuring discrete practices regarding types of assessments, meetings, and interventions provided by hours spent in each activity. They also included open-ended interview questions to qualitatively identify perceived barriers to preferred practice. Future research

examining the practices of school psychologists in the ESC division could utilize similar methodologies to conduct more in-depth analyses of discrepancies and gain a better understanding of barriers to practice.

Given the discrepancies between school psychologists' practices in their respective states, future studies should explore and examine underlying contributing factors to these differences. For example, school psychology practices in Kentucky and Tennessee appear to be more aligned with a comprehensive service delivery model than in Alabama. The current study highlighted systemic differences between the states that may be contributing to discrepancies in practice, such as school psychologist-to-student ratios, personnel shortages, and implementation of school-wide and system-level practices (e.g., PBIS, RTI, SEL, MTSS). Furthermore, nearly three-quarters of participants from Alabama reported holding the NCSP credential compared to less than one-half of the participants from Kentucky or Tennessee. This finding strongly indicates further inquiry into the effects systemic factors have on comprehensive school psychology practices. Additionally, results from this study indicated that the availability of other SMBH providers (e.g., school social workers, behavior specialists, and contracted community health providers) was less prevalent in Kentucky than in Alabama or Tennessee, but school psychologists in Kentucky were significantly more engaged in direct and indirect mental health services. Therefore, future studies should examine the impact that coordinated services with other SBMH providers have on comprehensive school psychology practices.

Similarly, future studies should explore the impact of underlying factors, specifically the availability of resources and aforementioned systemic factors, on comprehensive school psychology services in rural areas. It would also be beneficial to examine differences between

states in the ESC division at the community setting level (e.g., rural practice in Alabama vs. rural practice in Tennessee).

Implications of the Study for the Field of School Psychology

The present study provides several implications for the field of school psychology. First, this study confirmed previous findings that overall school psychology practices in the ESC census division are lagging in their progression toward more comprehensive service delivery as promoted by NASP (2010). High practitioner-to-student ratios and shortages in the field are likely suspects that contribute to this problem. In particular, school psychology in Alabama is overwhelmingly fixed within a traditional role definition despite practitioners reporting a need for more comprehensive services.

Findings from this study support the need for more advocacy of school psychology in the ESC census division. State associations of school psychology can be effective vehicles for raising awareness of the need for more comprehensive services with their state departments of education. For example, the Kentucky Association for Psychology in the Schools is a member of the greater Kentucky Coalition for Mental Health which lobbies for mental health issues at the legislative level. Similarly, the Tennessee Association of School Psychologists (TASP) has an active voice with legislators and lobbied for changes to evaluation timelines to allow for more equitable triage and prioritization of student needs during the COVID-19 pandemic (TASP, 2020). Collaboration and coordination between state associations can further propel school psychologists' practices in this division towards the NASP Practice Model (NASP, 2020c). The state associations for Alabama, Mississippi, and Tennessee host the MidSouth Conference for Psychology in the Schools every other year. Joint efforts could be made to survey school

psychologists who attend this conference to gather longitudinal data on the progression of school psychology practices and barriers to practice.

Additionally, this study highlighted the need for systemic practices to support comprehensive school psychology practices, especially in Alabama. Systems change are complex and begin with a climate or culture receptive and ready for change (Merrell et al., 2006). Unless systems acknowledge a need for change, attempts at systems change will be futile. Advocating for more comprehensive school psychology services often begins with advocacy efforts aimed at awareness of the existence of school psychologists and the expertise and skills they offer students and schools. Systems change efforts often fail past initial phases when external supports are removed (Fuchs et al., 1996; McDougal et al., 2000) without or before ensuring the system has the infrastructure to support the changes over time (Merrell et al., 2006). Therefore, efforts at initiating school-wide or system-level programs (e.g., PBIS, MTSS, RTI, SEL) should utilize external assistance teams and include school psychologists as key players at the district level.

Given national projected shortages of school psychologists (Health Resources and Services Administration, 2016) and the findings from this study regarding the high ratios of school psychologists in the ESC division, efforts should be made at recruiting and training future school psychologists. Fully-funded school psychology training programs through grants with service obligations in the state or rural areas could incentivize college undergraduates to join the field as well as educators already working in the ESC division as teachers, administrators or in other capacities (KASP, 2017). In fact, the University of Alabama announced such a program in October 2020, through Project RIIPL (Rural Interdisciplinary, Interconnected Practitioner Leader). Project RIIPL will award 20 applicants a fully funded two-year training program

yielding a specialist-level degree in either special education or school psychology in exchange for a two-year workplace commitment post-graduation (University of Alabama, n.d.).

Similarly, partnerships between university training programs and rural school districts could be established to ensure adequate internship experiences and supervision while keeping school psychologists in the census division (Mann et al., 2019). Interestingly, the majority of school psychologists in the current study completed internships within the state they currently practice. Hosp and Reschly (2002) noted the same trend in their study that school psychologists tend to practice in the same state or a neighboring state of where they were trained. School psychology training programs, internship programs, and individual supervising practitioners should examine the quality of the training, supervision, and mentorship they provide to ensure they align with the comprehensive nature of the NASP Practice Model (NASP, 2020c).

Finally, at a local level, school psychologists practicing within the ESC division can examine their practices in the context of their assigned school(s) and district to gain personal insight into their practices and specific barriers to providing comprehensive services. Once identified, school psychologists can share these findings with their supervisors to advocate and partner with their local school board and other associations for adequate personnel, resources, and compensation.

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APPENDIX A

RECRUITMENT EMAIL TEMPLATE

Recruitment Email

Dear *[insert name]*,

Did you know that school psychologists in the East South Central and South Atlantic regions of the United States reported lower salaries, higher student-to-practitioner ratios, and more time spent in traditional assessment role functions than practitioners in other census regions (Hosp & Reschly)? In almost 20 years, no research study has examined the practices of school psychologists in the four states that comprise the East South Central division (i.e., Alabama, Tennessee, Mississippi, Kentucky) and no study has looked solely at the practices of school psychologists in these states.

My name is Ashley Partridge and I am a doctoral candidate at the University of Alabama's school psychology program. I am writing to invite you to participate in my research study for my dissertation about the roles and practices of school psychologists in the East South Central census division of the United States (i.e., Alabama, Mississippi, Kentucky, and Tennessee) You or staff members in your department may be eligible to participate in this study as a full-time school psychologist. I obtained your contact information from your school district's website.

Results from this study could be instrumental in advocating for improved state and local policies and legislation to address workforce shortages, ratios, practices, and compensation for school psychologists and ultimately improved services for children being served in these states.

Participants may enter for a random drawing to win one of four \$25 Amazon gift cards at the end of the survey. Remember, this is completely voluntary. You can choose to be in the study or not. If you have any questions about the study, please contact me, principal investigator Ashley Partridge, via email anpartridge@crimson.ua.edu or phone (256-361-9412) or faculty supervisor Dr. June Preast jpreast@ua.edu or 205-348-7690).

If you or other staff members decide to participate in this study, you will complete a 10-15 minute online survey which can be found here: *[survey link here]*

Thank you very much.

All the best,

Ashley N. Partridge, Ed.S., NCSP

APPENDIX B

RECRUITMENT SOCIAL MEDIA TEMPLATE

Social Media Recruitment Post

Do you work in Alabama, Tennessee, Mississippi, or Kentucky? If so, then you may be eligible to participate in a research study about the roles and practices of school psychologists in the East South Central census division of the United States.

Did you know that school psychologists in the East South Central and South Atlantic regions of the United States reported lower salaries, higher student-to-practitioner ratios, and more time spent in traditional assessment role functions than practitioners in other census regions (Hosp & Reschly)? In almost 20 years, no research study has examined the practices of school psychologists in the four states that comprise the East South Central division (i.e., Alabama, Tennessee, Mississippi, Kentucky) and no study has looked solely at the practices of school psychologists in these states.

My name is Ashley Partridge and I am a doctoral candidate at the University of Alabama's school psychology program. I am writing to invite you to participate in my research study for my dissertation about the roles and practices of school psychologists in the East South Central census division of the United States (i.e., Alabama, Mississippi, Kentucky, and Tennessee). Results from this study could be instrumental in advocating for improved state and local policies and legislation to address workforce shortages, ratios, practices, and compensation for school psychologists and ultimately improved services for children being served in these states.

Participants will complete a 10-15 minute online survey and may enter for a random drawing to win one of four \$25 Amazon gift cards at the end of the survey. Remember, this is completely voluntary. You can choose to be in the study or not. For more information about the study itself and to participate in the survey, click here: *[insert survey link]*.

If you have any questions about the study, please contact principal investigator Ashley Partridge via email anpartridge@crimson.ua.edu or phone (256-361-9412) or faculty supervisor Dr. June Preast (jilpreast@ua.edu) or 205-348-7690).

APPENDIX C

IRB APPROVAL FOR DISSERTATION STUDY

THE UNIVERSITY OF ALABAMA® | Office of the Vice President for
Research & Economic Development
Office for Research Compliance

November 10, 2020

Ms. Ashley Partridge
Department of Ed Studies Psy/Research Methodology Counseling
College of Education
Box 870231

Re: IRB # 20-09-3896: "Actual and Perceived Ideal Practices of School Psychologists: A Regional and State-Level Comparison of Role Discrepancies to the National Association of School Psychologists Practice Model"

Dear Ms. Partridge:

The University of Alabama Institutional Review Board has granted approval for your proposed research. Your application has been given exempt approval according to 45 CFR part 46. Approval has been given under exempt review category 2 as outlined below:


(2) Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:

(iii) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by §46.111(a)(7).

The approval for your application will lapse on November 9, 2021. If your research will continue beyond this date, please submit the annual report to the IRB as required by University policy before the lapse. Please note, any modifications made in research design, methodology, or procedures must be submitted to and approved by the IRB before implementation. Please submit a final report form when the study is complete.

Please use reproductions of the IRB approved informed consent form to obtain consent from your participants.

Sincerely,


Carpanato I. Myles, MSM, CIM, CIP
Director & Research Compliance Officer

Jessup Building | Box 870127 | Tuscaloosa, AL 35487-0127
205-348-8461 | Fax 205-348-7189 | Toll Free 1-877-820-3066

APPENDIX D

PERMISSION TO ADAPT AND REPRODUCE NASP MEMBERSHIP SURVEY

10/13/2020

The University of Alabama Mail - Seeking Permission to Adapt 2015 NASP Membership Survey



Ashley Partridge <anpartridge@crimson.ua.edu>

Seeking Permission to Adapt 2015 NASP Membership Survey

Walcott, Christy <WALCOTT@ecu.edu>
To: Ashley Partridge <anpartridge@crimson.ua.edu>
Cc: Nicholas Affrunti <nafrunti@naspweb.org>

Tue, Sep 15, 2020 at 10:20 AM

Hi Ashley, I heard back from the NASP Director of Research. We are in agreement about the specific conditions you laid out (reprinted below in red), and you have our permission to use an adapted version of the 2015 NASP Member Survey. I do not believe it holds copyright status, but Nick can correct me if I am wrong. Please use the following **statement of attribution**. Best of luck with your research! ~Christy Walcott, Chair NASP Research Committee

Survey adapted and reproduced for this study with approval from the NASP Director of Research and the Chair of the NASP Research Committee, September 2020. Citation for original survey is: Walcott, C. M., & Hyson, D. (2018, June). Results from the NASP 2015 membership survey, part one: Demographics and employment conditions. NASP Research Reports, 3(1). Bethesda, MD: National Association of School Psychologists.

In addition to using the adapted survey, I also ask your permission to reproduce it in my dissertation appendix. I would like to adapt, use, and reproduce the 2015 NASP Membership Survey as attached under the following conditions:

- I will use the adapted 2015 NASP Membership Survey only for my research study and will not sell or use it for any other purpose.
- I will include a statement of attribution ~~and copyright~~ on all copies of the instrument. If you have a specific statement of attribution that you would like for me to include, please provide it in your response.
- At your request, I will send a copy of my completed research study to you upon completion of the study and/or provide a hyperlink to the final manuscript.

If these are acceptable terms and conditions, please indicate so by replying to me through e-mail at anpartridge@crimson.ua.edu.

[Quoted text hidden]

APPENDIX E

ADAPTED SURVEY

School Psychologists' Practices

Start of Block: Introduction

Please read this informed consent carefully before you decide to participate in the study.

You are being asked to take part in research conducted by Ashley N. Partridge who is a doctoral student in the Department of Educational Studies in Psychology, Research Methodology and Counseling at the University of Alabama. Your participation is entirely voluntary and you may refuse to participate, or you may decide to stop your participation at any time. Should you refuse to participate in the study or should you withdraw your consent and stop participation in the study, your decision will involve no penalty or loss of benefits to which you may be otherwise entitled. Please read the information below carefully and ask questions about anything you don't understand before deciding whether or not to participate.

Consent Form Key Information:

- Open to school psychologists who are practicing in Alabama, Kentucky, Mississippi, and Tennessee
- Participate in a 15-20 minute survey about school psychologists' roles and practices
- No information collected that will connect identity with responses
- Volunteer at the end of the survey for a chance to enter one of four (4) \$25 Amazon gift cards

Purpose of the research study: The main purpose of this study is to explore the current roles and practices of school psychologists working in the East South Central census division of the United States. School psychologists have traditionally held the role of special education evaluators despite being trained to deliver more comprehensive services. Previous research indicates a growing trend in the field overall towards more comprehensive service delivery models. However, discrepancies exist between school psychologists practicing in different regions of the United States as well as whether they practice in more rural, suburban or urban areas. Specifically, this study will examine and compare school psychologists' practices in each

of the four states in the ESC division (e.g., Alabama, Kentucky, Mississippi, and Tennessee) as well as their alignment to recommended national standards of school psychology practice.

What you will do in the study: Potential participants are provided a Qualtrics link to the online survey. The landing page before the survey begins (this page) offers the opportunities to assent to participate in the study or not to participate. Assenting participants will complete an anonymous online survey assessing their current and typical roles and practices as a school psychologist.

Time required: The study will require no more than 15-20 minutes of your time. The study plans to collect data on an ongoing basis for at least the next month.

Risks: Any risks should be relatively minor, and measures have been enacted to minimize any aversive consequences. Specifically, during actual Internet communication procedures or accessing an unprotected wireless system, there is a possible risk of breach of confidentiality or data security. If participants choose to access an online survey via an unprotected wireless network, their confidentiality and data is more easily compromised. It is recommended that participants complete the survey on a protected network to minimize this risk. Anonymous data will be collected within the secure Qualtrics web site and will only be accessible through the principal investigator's password-protected login. Further, any downloaded data would be kept on a computer behind the principal investigator's secure login. Regarding study procedures, a participant may experience minor discomfort, heightened awareness of, dissatisfaction with or self-consciousness about their roles and practices as a school psychologist. However, participants may choose not to answer any question or to discontinue.

Benefits: There are no direct benefits to participants. In terms of indirect benefits, participants may obtain insight into the breadth and depth of their practices as school psychologists. They may also benefit from a new or renewed focus on specific practice areas. Also, data collected from participants could potentially lead to program-level improvements, which could potentially benefit graduate students in the future. The findings of this study could be instrumental in advocating for more school-based mental health professionals, like school psychologists, in rural areas and regions in Alabama, Tennessee, Kentucky, and Mississippi through training initiatives and other opportunities to improve rural mental health services for children. Findings also have the potential to lead to more awareness of school psychologists' training and expertise by state departments of education and may help advocate for improved compensation and improved retention and practitioner-to-student ratios for school psychologists practicing and training in these states.

Confidentiality: The information that you give in the study will be handled confidentially. No guarantees can be made regarding the interception of data sent via the Internet or email by any third parties. Every effort will be made to maintain the confidentiality of your study records. Your name and other information that could be used to identify you will not be collected or linked to the data. Because of the nature of the data, it may be possible to deduce your identity; however, there will be no attempt to do so and your data will be reported in a way that will not identify you. Internet administration will be set so that computer IP address logs will be

deleted. Participant's data for this research project will be maintained and safeguarded on a password-protected database by the Principal Investigator for a minimum of three years after completion of the study. After that time, the data may be destroyed.

Voluntary participation: Your participation in the study is completely voluntary.

Right to withdraw from the study: You have the right to withdraw from the study at any time without penalty.

How to withdraw from the study: If you want to withdraw from the study, you may discontinue answering the survey. Incomplete survey responses will be automatically deleted after one week. If you choose to withdraw from the survey after completion, please contact the researcher directly. There is no penalty for withdrawing.

Compensation/Reimbursement: No compensation or reimbursement is offered for participation in this study. However, you will have the option to enter into a drawing for one of four (4) \$25 Amazon gift cards. Upon completion of the survey, you may click on the link provided to enter your name and email address in a separate database which is not tied to your survey responses.

If you have questions about the study or need to report a study related issue please contact, contact:

Name of Principal Investigator: Ashley Partridge, Ed.S., NCSP

Title: Doctoral Candidate, School Psychology Program

Department Name: Department of Educational Studies in Psychology, Research Methodology and Counseling, University of Alabama

Telephone: (256) 361-9412

Email address: anpartridge@crimson.ua.edu Faculty Advisor's Name: June L. Preast, PhD., NCSP

Department Name: Department of Educational Studies in Psychology, Research Methodology and Counseling, University of Alabama

Telephone: (205) 348-7690

Email address: jlpreast@ua.edu

If you have questions about your rights as a participant in a research study, would like to make suggestions or file complaints and concerns about the research study, please contact: Ms. Tanta Myles, the University of Alabama Research Compliance Officer at (205)-348-8461 or toll-free at 1-877-820-3066. You may also ask questions, make suggestions, or file complaints and concerns through the IRB Outreach Website at <http://ovpred.ua.edu/research->

compliance/prco/. You may email the Office for Research Compliance at rscompliance@research.ua.edu.

Agreement:

Submission of the completed survey will be taken as evidence of your informed consent to participate

End of Block: Introduction

Start of Block: Demographics

Q1 What is your gender?

- Male (1)
 - Female (2)
 - Prefer not to answer (3)
 - Other: (4) _____
-

Q2 What is your age?

- 18-24 years old (1)
 - 25-34 years old (2)
 - 35-44 years old (3)
 - 45-54 years old (4)
 - 55-64 years old (5)
 - 65-74 years old (6)
 - 75 years or older (7)
-

Q3 What is your race?

- White (1)
 - Black or African American (2)
 - American Indian or Alaska Native (3)
 - Asian (4)
 - Native Hawaiian or Pacific Islander (5)
 - Other (6) _____
-

Q4 Are you of Hispanic, Latino, or Spanish origin?

- Yes (1)
 - No (2)
 - Prefer not to answer (3)
-

Q5 How many years of experience do you have in school psychology , not including graduate preparation and internship?

- 0 to 5 years (1)
- 6 to 10 years (2)
- 11 to 15 years (3)
- 16 to 20 years (4)
- 21 to 25 years (5)
- 25 years or more (6)

Q6 What is your current primary job FUNCTION?

- School psychologist (1)
 - University/college faculty (2)
 - Administrator (3)
 - State department of education employee (4)
 - Other (5) _____
-

Q7 What is your current primary job TITLE?

- School psychologist (1)
 - Psychometrist (2)
 - Special education coordinator, director, or administrator (3)
 - University faculty/professor (4)
 - Program or resource specialist (5)
 - Behavior specialist (6)
 - Intern (7)
 - Contractor (8)
 - Other (9) _____
-

Q8 In which state are you employed?

- Alabama (1)
- Kentucky (2)
- Mississippi (3)
- Tennessee (4)
- Other (5) _____

Skip To: End of Survey If In which state are you employed? = Other

Q9 What is your annual salary in your primary position?

- Less than \$20,000 (1)
 - \$20,000 to \$34,999 (2)
 - \$35,000 to \$49,999 (3)
 - \$50,000 to \$74,999 (4)
 - \$75,000 to \$99,999 (5)
 - Over \$100,000 (6)
-

Q10 On what type of pay scale are you paid as a school psychologist in your district?

- Teacher (1)
 - Administrative (2)
 - Professional (3)
 - Other (4) _____
-

Q11 Do school psychologists in your district receive a stipend or supplement for holding national certification (NCSP)?

- Yes (1)
- No (2)

Display This Question:

If Do school psychologists in your district receive a stipend or supplement for holding national cer... = Yes

Q12 What is the amount of the stipend or supplement for holding national certification (NCSP)?

Q13 What is your highest degree level in school psychology?

- Master's level only (1)
- Specialist-level (e.g., PsyS, EdS, SSP, CAS, CAGS) (2)
- Doctoral-level (e.g., PhD, PsyD, EdD) (3)

Q14 What is the name of the school psychology program where you received your degree?

Q15 In what state did you complete your school psychology internship?

▼ Alabama (1) ... Other (52)

Q16 Which credentialing body issued your current practice credential(s)? Please mark all that apply.

- State education agency (e.g., state department of education) (1)
 - State board of psychology (2)
 - Other (3) _____
-

Q17 What other credentials do you hold? Please mark all that apply.

- Nationally Certified School Psychologist (NCSP) (1)
 - Board Certified Behavior Analyst (BCBA) (2)
 - Licensed Professional Counselor (LPC) (3)
 - American Board of Professional Psychology (ABPP) (4)
 - American Board of School Neuropsychology (ABSNP) (5)
 - Other (6) _____
-

Q18 Was your primary employment in 2019-2020 FULL TIME in a SCHOOL SETTING such as a public, private, or faith-based preschool, elementary school, middle/jr. high school, and/or high school?

- Yes (1)
- No (2)

Skip To: End of Survey If Was your primary employment in 2019-2020 FULL TIME in a SCHOOL SETTING such as a public, private,... = No

Q19 Which of the following best describes the geographic location of the schools you serve?

- Urban (1)
 - Suburban (2)
 - Rural (3)
 - Other (4) _____
-

Q20 How many months were in your 2019-2020 contract period?

- 9 months (1)
 - 10 months (2)
 - 11 months (3)
 - 12 months (4)
 - Other (5) _____
-

Q21 How many schools did you serve in the 2019-2020 school year?

- 1 (1)
 - 2 (2)
 - 3 (3)
 - 4 (4)
 - 5 or more (5)
-

Q22 What was the total number of students enrolled in the schools to which you were assigned?

Q23 How many full-time equivalent school psychologists (including yourself) were employed in your school district in 2019-2020?

Q24 What other school-based mental health professionals are employed in your district? (check all that apply)

School counselor (1)

School social worker (2)

Behavior specialist (3)

Other (4) _____

Q25 How many students were enrolled in your district in 2019-2020?

- Less than 250 (1)
 - 250 to 999 (2)
 - 1,000 to 1,999 (3)
 - 2,000 to 4,999 (4)
 - 5,000 to 9,999 (5)
 - 10,000 to 19,999 (6)
 - 20,000 or more (7)
-

Q26 Is there a school psychology program within a 50 mile radius of your current place of employment?

- Yes (1)
 - No (2)
 - Don't know (3)
-

Q27 Does your school or district follow a statewide initiative or mandate for any of the following (check all that apply):

- Positive Behavior Intervention Support (PBIS) (1)
- Social-Emotional Learning (SEL) (2)
- Response to Intervention (RTI) (3)
- Multi-Tiered Support Systems (MTSS) (4)
- Other: (5) _____
- None of the above (6)
- Don't Know (7)

End of Block: Demographics

Start of Block: Roles and Practices

Q28 How much of your practice during a typical school year is spent in each of the following:

	None at all (1)	A little (2)	Occasionally (3)	About half (4)	Quite a bit (5)	Very much (6)	Almost all (7)
Assessment-related activities (e.g., administering, scoring, writing report, records review, other clerical paperwork) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Referral, Eligibility, or Individualized Education Program (IEP) meetings (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intervention planning and team meetings (e.g., grade level, Response-to-Intervention, Positive Behavior Intervention Supports) (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Program evaluation/research (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
District level planning/collaboration (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consultation with general education staff (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consultation with families/parents (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Direct academic or social skill intervention (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Counseling (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Crisis intervention (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prevention or early intervention activities (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supervision (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-service trainings or presentations (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other: (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q29 How often do you engage in each of the following activities in a typical school year?

	Never (1)	Rarely (2)	Occasionally (3)	About half the time (4)	Quite a bit (5)	Most of the time (6)	Always (7)
Collecting, analyzing, and interpreting data to identify individual student strengths and needs for reasons OTHER THAN special education eligibility (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Collecting, analyzing, and interpreting data to develop and evaluate system-level or school-wide programs (e.g., bullying prevention, PBIS, school violence prevention) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Conducting individual evaluations for the purpose of determining eligibility for special education (3)

Participating in meetings focused on the development of IEPs (4)

Participating in evaluation or meetings focused on the development of 504 plans (5)

Consulting and collaborating with a team responsible for developing and evaluating students in need of instructional supports (6)

Consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs (e.g., bullying prevention, PBIS, school violence prevention)
(7)



Q31 How often do you engage in each of the following activities in a typical school year?

	Never (1)	Rarely (2)	Occasionally (3)	About half the time (4)	Quite a bit (5)	Most of the time (6)	Always (7)
Providing services to families and promoting family engagement (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing interventions and instructional support to develop academic skills (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing mental and behavioral health services and interventions (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing and implementing school-wide strategies to promote safe and supportive learning environments and student wellness (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participating in school crisis prevention and response efforts (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participating in research or the review of research to improve practice (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing supervision/mentorship (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q32 How many psycho-educational evaluations do you complete relating to initial determination of special education eligibility in a typical school year?

Q33 How many reevaluations do you complete in a typical year?

Q34 About how many total special education meetings do you attend during a typical school year?

Q35 How many students did you counsel individually during a typical school year in each of the following primary areas? Enter number of students, not sessions.

Academics (e.g., study skills, academic skill development): (1)

Behavioral and mental health issues or concerns: (2)

Other: (3) _____

Q36 How many student groups do you conduct during a typical school year in each of the following primary areas?

Enter number of student groups, not sessions.

Academics (e.g., study skills, academic skill development): (1)

Behavioral and mental health issues or concerns: (2)

Other: (3) _____

Q37 How many in-service programs do you conduct during a typical school year?

None (1)

1 to 4 (2)

5 to 9 (3)

10 or more (4)

Q38 How many presentations to parents do you make during a typical school year?

None (1)

1 to 4 (2)

5 to 9 (3)

10 or more (4)

Q39 How much of your practice do you think would be needed to BEST SERVE the students in your school(s) in each of the following activities:

	None at All (1)	A little (2)	Occasionally (3)	About half (4)	Quite a bit (5)	Very much (6)	Almost All (7)
Assessment-related activities (e.g., administering, scoring, writing report, records review, other clerical paperwork) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Referral, Eligibility, or Individualized Education Program (IEP) meetings (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intervention planning and team meetings (e.g., grade level, Response-to-Intervention, Positive Behavior Intervention Supports) (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Program evaluation/research (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
District level planning/collaboration (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consultation with general education staff (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consultation with families/parents (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Direct academic or social skill intervention (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Counseling (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Crisis intervention (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prevention or early intervention activities (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supervision (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-service trainings or presentations (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other: (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q40 How often do you think you would need to engage in each of the following activities to BEST SERVE the students in your school(s)?

	Never (1)	Rarely (2)	Occasionally (3)	About half the time (4)	Quite a bit (5)	Most of the time (6)	Always (7)
Collecting, analyzing, and interpreting data to identify individual student strengths and needs for reasons OTHER THAN special education eligibility (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Collecting, analyzing, and interpreting data to develop and evaluate system-level or school-wide programs (e.g., bullying prevention, PBIS, school violence prevention) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Conducting individual evaluations for the purpose of determining eligibility for special education (3)

Participating in meetings focused on the development of IEPs (4)

Participating in evaluation or meetings focused on the development of 504 plans (5)

Consulting and collaborating with a team responsible for developing and evaluating students in need of instructional supports (6)

Consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs (e.g., bullying prevention, PBIS, school violence prevention)
(7)

Q41 How often do you think you would need to engage in each of the following activities to BEST SERVE the students in your school(s)?

	Never (1)	Rarely (2)	Occasionally (3)	About half the time (4)	Quite a bit (5)	Most of the time (6)	Always (7)
Providing services to families and promoting family engagement (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing interventions and instructional support to develop academic skills (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing mental and behavioral health services and interventions (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing and implementing school-wide strategies to promote safe and supportive learning environments and student wellness (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participating in school crisis prevention and response efforts (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participating in research or the review of research to improve practice (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing supervision/mentorship (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Roles and Practices

Start of Block: End of Survey

Thank you for your time and participation in this survey. Please continue to the next page where you will be redirected to a separate online survey where you can enter for a chance to win one of four (4) \$25 Amazon gift cards.

Survey adapted and reproduced for this study with approval from the NASP Director of Research and the Chair of the NASP Research Committee, September 2020. Citation for original survey is: Walcott, C. M., & Hyson, D. (2018, June). Results from the NASP 2015 membership survey, part one: Demographics and employment conditions. NASP Research Reports, 3(1). Bethesda, MD: National Association of School Psychologists.

End of Block: End of Survey

APPENDIX F

GIFT CARD DRAWING ENTRY SURVEY

10/13/2020

Qualtrics Survey Software

Default Question Block

If you wish to enter for a chance to win one of four (4) Amazon gift cards, please enter your name and email address below. Drawings will be made using a random drawing generator mid-December 2020 after the survey window has closed. Winners will be contacted via email at the email address provided.

Please provide your name:

Please enter your email address:

Block 1

Powered by Qualtrics

APPENDIX G

Median Ratings of Actual and Needed Practices Across States

	AL		KY		MS		TN		Total	
	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed
Domain 1: Data-Based Decision Making and Accountability^a	3.88	4.50	4.03	4.25	4.00	4.00	4.00	4.25	4.00	4.25
Assessment-related activities (e.g., administering, scoring, writing reports, records review) ^a	6.00	5.00	6.00	5.00	7.00	4.00	6.00	5.00	6.00	5.00
Collecting, analyzing, and interpreting data about student strengths and needs for reasons other than special education eligibility ^a	1.00	4.50	2.00	5.00	1.00	5.00	3.00	4.00	2.00	4.00
Conducting individual evaluations for special education eligibility ^a	6.50	4.00	6.00	5.00	7.00	4.00	6.00	4.00	6.00	4.00
Collecting, analyzing and interpreting data to develop and evaluate system-level or school-wide programs ^a	1.00	5.00	1.00	4.00	1.00	3.00	1.00	3.00	1.00	4.00
Domain 2: Consultation and Collaboration^b	2.58	4.17	3.33	4.00	3.17	4.83	3.17	3.67	3.17	4.00

	AL		KY		MS		TN		Total	
	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed
Referral, eligibility, IEP meetings ^a	6.00	5.00	6.00	5.00	6.00	4.00	5.00	4.00	6.00	5.00
Intervention planning and team meetings ^b	2.00	4.00	3.00	5.00	3.00	5.00	3.00	4.00	3.00	4.00
Consultation with general education staff ^a	3.00	3.50	3.00	4.00	3.00	5.00	3.00	3.00	3.00	4.00
Consultation with families/parents ^b	2.00	3.50	2.00	4.00	3.00	5.00	3.00	3.00	2.00	3.00
Consulting and collaborating with a team to develop instruction supports ^a	2.50	4.50	3.00	5.00	2.00	5.00	3.00	3.00	3.00	4.00
Consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs ^a	1.00	4.50	2.00	5.00	2.00	5.00	2.00	3.00	2.00	4.00
Domain 3: Interventions and Instructional Support to Develop Academic Skills^a	2.00	3.67	2.00	3.67	1.33	5.00	2.00	3.00	2.00	3.33
Direct academic or social skill intervention ^a	1.00	3.50	1.00	4.00	1.00	5.00	1.00	3.00	1.00	3.00
Consulting and collaborating with a team to develop instruction supports ^a	2.50	4.50	3.00	5.00	2.00	5.00	3.00	3.00	3.00	4.00
Providing interventions and instructional support to develop academic skills ^a	1.00	3.50	1.00	3.00	1.00	5.00	1.00	3.00	1.00	3.00

	AL		KY		MS		TN		Total	
	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed
Domain 4: Interventions and Mental Health Services to Develop Social and Life Skills^a	1.33	3.67	2.00	4.00	1.00	5.00	1.33	3.00	1.33	3.33
Counseling ^a	1.00	3.50	2.00	3.00	1.00	5.00	1.00	3.00	1.00	3.00
Direct academic or social skill intervention ^a	1.00	3.50	1.00	4.00	1.00	5.00	1.00	3.00	1.00	3.00
Providing mental and behavioral health services and interventions ^a	1.50	4.50	3.00	5.00	1.00	5.00	2.00	4.00	2.00	4.00
Domain 5: School-Wide Services to Promote Learning^b	1.13	1.13	1.75	1.75	1.25	1.25	1.50	1.50	1.50	1.50
District level planning/collaboration ^b	1.00	3.00	2.00	3.00	1.00	4.00	2.00	3.00	2.00	3.00
Collecting, analyzing and interpreting data to develop and evaluate system-level or school-wide programs ^a	1.00	5.00	1.00	4.00	1.00	3.00	1.00	3.00	1.00	4.00
Consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs ^a	1.00	4.50	2.00	5.00	2.00	5.00	2.00	3.00	2.00	4.00
Developing and implementing school-wide strategies to promote safe and	1.00	4.00	2.00	4.00	1.00	5.00	1.00	3.00	1.00	4.00

	AL		KY		MS		TN		Total	
	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed
supportive learning environments and student wellness ^a										
Domain 6: Preventive and Responsive Services^a	1.17	1.17	2.00	2.00	2.00	2.00	1.33	1.33	1.67	1.67
Crisis intervention ^a	1.00	3.00	2.00	3.00	1.00	5.00	1.00	3.00	2.00	3.00
Prevention or early intervention activities ^a	1.00	3.50	1.00	3.00	4.00	5.00	1.00	3.00	1.00	3.00
Participating in school crisis prevention and response efforts ^a	1.00	3.00	3.00	3.00	1.00	5.00	2.00	3.00	2.00	3.00
Domain 7: Family-School Collaboration Services^b	1.75	3.25	2.00	3.50	2.00	4.50	2.00	3.00	2.00	3.00
Consultation with families/parents ^b	2.00	3.50	2.00	4.00	3.00	5.00	3.00	3.00	2.00	3.00
Providing services to families and promoting family engagement ^a	1.00	3.00	1.00	3.00	1.00	4.00	1.00	3.00	1.00	3.00
Domain 8: Diversity in Development and Learning^a	1.67	1.67	3.33	3.33	2.00	2.00	3.00	3.00	3.00	3.00
Collecting, analyzing, and interpreting data about student strengths and needs for reasons other than special education eligibility ^a	1.00	4.50	2.00	5.00	1.00	5.00	3.00	4.00	2.00	4.00

	AL		KY		MS		TN		Total	
	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed
Participating in meetings for IEP development ^a	2.00	3.00	6.00	5.00	2.00	3.00	4.00	3.00	4.00	3.00
Evaluation or meetings for 504 development ^a	1.00	3.00	2.00	3.00	3.00	3.00	3.00	3.00	2.00	3.00
Domain 9: Research and Program Evaluation^a	1.13	3.88	1.50	3.75	1.50	4.00	1.50	3.00	1.50	3.50
Program evaluation/research ^a	1.00	3.00	1.00	2.00	1.00	3.00	1.00	3.00	1.00	3.00
Collecting, analyzing and interpreting data to develop and evaluate system-level or school-wide programs ^a	1.00	5.00	1.00	4.00	1.00	3.00	1.00	3.00	1.00	4.00
Consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs ^a	1.00	4.50	2.00	5.00	2.00	5.00	2.00	3.00	2.00	4.00
Research or review of research to improve practice ^a	1.00	3.00	1.00	3.00	2.00	5.00	1.00	3.00	1.00	3.00
Domain 10: Legal, Ethical, and Professional Practice^a	1.50	2.67	1.67	3.00	1.67	3.67	1.67	2.67	1.67	2.67
Supervision ^a	1.00	3.00	1.00	2.00	1.00	3.00	1.00	2.00	1.00	2.00
Providing supervision/mentorship ^a	1.00	3.00	1.00	3.00	1.00	3.00	1.00	2.00	1.00	3.00
In-service trainings or presentations ^a	2.00	3.00	2.00	3.00	3.00	5.00	2.00	3.00	2.00	3.00

APPENDIX H

Median Ratings of Actual and Needed Practices by Community Setting

	Urban		Suburban		Rural		Other		Total	
	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed
Domain 1: Data-Based Decision Making and Accountability^a	4.00	4.00	4.00	4.25	4.00	4.25	4.50	3.75	4.00	4.25
Assessment-related activities (e.g., administering, scoring, writing reports, records review) ^a	6.00	5.00	6.00	4.50	6.00	5.00	7.00	5.00	6.00	5.00
Collecting, analyzing, and interpreting data about student strengths and needs for reasons other than special education eligibility ^a	3.00	4.00	2.00	4.00	2.50	3.00	3.00	3.00	2.00	4.00
Conducting individual evaluations for special education eligibility ^a	6.00	4.00	6.50	4.00	6.00	4.00	7.00	4.00	6.00	4.00
Collecting, analyzing and interpreting data to develop and evaluate system-level or school-wide programs ^a	2.50	3.00	1.00	4.00	1.00	4.00	1.00	3.00	1.00	4.00

	Urban		Suburban		Rural		Other		Total	
	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed
Domain 2: Consultation and Collaboration^b	3.58	3.92	3.08	4.00	2.83	4.00	2.50	2.83	3.17	4.00
Referral, eligibility, IEP meetings ^a	5.50	4.00	6.00	4.00	6.00	5.00	5.00	3.00	6.00	5.00
Intervention planning and team meetings ^b	3.00	4.00	3.00	4.50	3.00	4.00	3.00	3.00	3.00	4.00
Consultation with general education staff ^a	3.50	3.00	3.00	4.00	3.00	4.00	1.00	2.00	3.00	4.00
Consultation with families/parents ^b	3.00	3.50	2.00	3.50	2.00	3.00	2.00	3.00	2.00	3.00
Consulting and collaborating with a team to develop instruction supports ^a	3.00	3.50	3.00	4.00	3.00	4.00	3.00	3.00	3.00	4.00
Consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs ^a	3.00	4.00	2.00	4.00	2.00	3.00	1.00	3.00	2.00	4.00
Domain 3: Interventions and Instructional Support to Develop Academic Skills^a	2.73	3.33	1.67	3.50	1.83	3.33	1.67	3.33	2.00	3.33
Direct academic or social skill intervention ^a	2.00	3.00	1.00	3.50	1.00	3.00	1.00	4.00	1.00	3.00
Consulting and collaborating with a team to develop instruction supports ^a	3.00	3.50	3.00	4.00	3.00	4.00	3.00	3.00	3.00	4.00

	Urban		Suburban		Rural		Other		Total	
	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed
Providing interventions and instructional support to develop academic skills ^a	2.00	3.00	1.00	3.00	1.00	3.00	1.00	3.00	1.00	3.00
Domain 4: Interventions and Mental Health Services to Develop Social and Life Skills^a	2.00	3.17	1.33	4.00	1.67	3.33	1.00	4.00	1.33	3.33
Counseling ^a	1.50	3.00	1.00	4.00	1.00	3.00	1.00	4.00	1.00	3.00
Direct academic or social skill intervention ^a	2.00	3.00	1.00	3.50	1.00	3.00	1.00	4.00	1.00	3.00
Providing mental and behavioral health services and interventions ^a	2.00	4.00	2.00	5.00	2.00	3.50	1.00	4.00	2.00	4.00
Domain 5: School-Wide Services to Promote Learning^b	2.75	2.75	1.25	1.25	1.50	1.50	1.25	1.25	1.50	1.50
District level planning/collaboration ^b	2.50	3.00	1.00	3.00	2.00	3.00	2.00	3.00	2.00	3.00
Collecting, analyzing and interpreting data to develop and evaluate system-level or school-wide programs ^a	2.50	3.00	1.00	4.00	1.00	4.00	1.00	3.00	1.00	4.00
Consulting and collaborating with a team regarding developing and	3.00	4.00	2.00	4.00	2.00	3.00	1.00	3.00	2.00	4.00

	Urban		Suburban		Rural		Other		Total	
	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed
evaluating system-level or school-wide programs ^a										
Developing and implementing school-wide strategies to promote safe and supportive learning environments and student wellness ^a	3.00	3.50	1.00	4.00	1.00	3.00	1.00	3.00	1.00	4.00
Domain 6: Preventive and Responsive Services^a	2.17	2.17	1.50	1.50	1.33	1.33	1.67	1.67	1.67	1.67
Crisis intervention ^a	2.00	3.00	1.00	3.00	1.50	3.00	2.00	2.00	2.00	3.00
Prevention or early intervention activities ^a	2.00	3.00	1.00	3.00	1.00	3.00	3.00	3.00	1.00	3.00
Participating in school crisis prevention and response efforts ^a	2.00	3.00	1.00	3.00	1.50	3.00	2.00	3.00	2.00	3.00
Domain 7: Family-School Collaboration Services^b	2.75	3.25	2.00	3.50	2.00	3.00	1.50	3.00	2.00	3.00
Consultation with families/parents ^b	3.00	3.50	2.00	3.50	2.00	3.00	2.00	3.00	2.00	3.00
Providing services to families and promoting family engagement ^a	2.00	3.00	1.00	3.00	1.00	3.00	1.00	3.00	1.00	3.00
Domain 8: Diversity in Development and Learning^a	3.17	3.17	2.67	2.67	3.00	3.00	3.00	3.00	3.00	3.00

	Urban		Suburban		Rural		Other		Total	
	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed
Collecting, analyzing, and interpreting data about student strengths and needs for reasons other than special education eligibility ^a	3.00	4.00	2.00	4.00	2.50	3.00	3.00	3.00	2.00	4.00
Participating in meetings for IEP development ^a	3.50	3.00	3.00	4.00	5.00	3.00	5.00	3.00	4.00	3.00
Evaluation or meetings for 504 development ^a	3.00	3.00	2.00	3.00	3.00	3.00	1.00	1.00	2.00	3.00
Domain 9: Research and Program Evaluation^a	2.25	3.38	1.25	3.75	1.25	3.13	1.00	2.75	1.50	3.50
Program evaluation/research ^a	2.00	3.00	1.00	3.00	1.00	2.50	1.00	2.00	1.00	3.00
Collecting, analyzing and interpreting data to develop and evaluate system-level or school-wide programs ^a	2.50	3.00	1.00	4.00	1.00	4.00	1.00	3.00	1.00	4.00
Consulting and collaborating with a team regarding developing and evaluating system-level or school-wide programs ^a	3.00	4.00	2.00	4.00	2.00	3.00	1.00	3.00	2.00	4.00
Research or review of research to improve practice ^a	2.00	3.00	1.00	3.00	1.00	3.00	1.00	3.00	1.00	3.00
Domain 10: Legal, Ethical, and Professional Practice^a	2.50	2.83	1.33	2.67	1.67	2.67	2.33	3.00	1.67	2.67

	Urban		Suburban		Rural		Other		Total	
	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed	Actual	Needed
Supervision ^a	2.00	2.00	1.00	2.00	1.00	2.50	3.00	3.00	1.00	2.00
Providing supervision/mentorship ^a	2.00	3.00	1.00	3.00	1.00	2.50	3.00	3.00	1.00	3.00
In-service trainings or presentations ^a	2.00	3.00	2.00	3.00	2.00	3.00	1.00	3.00	2.00	3.00