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School Psychological Services Throughout The Coronavirus-19 Pandemic

Emily Kristine Phillips
University of Northern Colorado

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Greeley, Colorado

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SCHOOL PSYCHOLOGICAL SERVICES THROUGHOUT THE CORONAVIRUS-19 PANDEMIC

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Emily Kristine Phillips

College of Education and Behavioral Sciences
Department of School Psychology
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Accepted by the Doctoral Committee

_____
David Hulac, Ph.D., Research Advisor

_____
Stephanie Kriescher, Ph.D., Committee Member

_____
Todd Sundeen, Ph.D., Committee Member

_____
Megan Stellino, Ph.D., Faculty Representative

Date of Dissertation Defense _____

Accepted by the Graduate School

_____
Jeri-Anne Lyons, Ph.D.
Dean of the Graduate School
Associate Vice President for Research

ABSTRACT

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School psychologists, among other educators, experienced a rapid transition to online educational service delivery in response to the Coronavirus-19 pandemic and related stay-at-home orders in March of 2020. Students and educators experienced significant difficulties throughout the pandemic, including increased mental health needs. Educators and parents may have required additional support from school psychologists in order to best support students' learning online. The purpose of the present study was to investigate how school psychological services in public United States primary and secondary schools changed and adapted in response to the Coronavirus-19 pandemic.

School psychology practitioners completed a survey where they provided virtual resources they utilized throughout the Coronavirus-19 pandemic, the amount of time spent in different service areas (i.e., consultation, assessment, and intervention), mental health, perceptions of their effectiveness of virtual service delivery, and feelings of crisis self-efficacy. Results show that school psychologists experienced a significant decrease in the amount of time spent in assessment and intervention and a significant increase in the amount of time spent in consultation and collaboration in response to the Coronavirus-19 pandemic. Upon the 2020-2021 academic year, the percentage of time spent in service areas returned to pre-pandemic levels. There was not a significant relationship between school psychologists' reported mental health

symptoms, feelings of crisis self-efficacy, and their perceptions of the effectiveness of their service delivery.

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CHAPTER I

INTRODUCTION TO THE STUDY

The virus that caused the Coronavirus-19 pandemic, SARS-CoV-2, is a novel virus that the World Health Organization (WHO, n.d.) declared a worldwide pandemic in March of 2020. The SARS-CoV-2 virus, hereafter referred to as the COVID-19 virus, has been known for its rapid transmission that can occur without observable symptoms and required the development of a vaccine(s). Between March 1, 2020, and May 31, 2020, 73% of counties within the United States experienced a mandatory stay-at-home order (Moreland et al., 2020). Stay-at-home orders necessitated change within public education, as school districts were faced with the questions of whether, and how, to provide education remotely.

In response to the Coronavirua-19 pandemic and subsequent stay-at-home orders, school districts in the United States were given some autonomy in deciding how they responded to the pandemic. In March of 2020, the majority of public schools in the United States chose between prematurely ending the school year or quickly transitioning to online education. School districts had to determine if teachers or district-level administration would choose the content during online/distance learning (Ballotpedia, n.d.). Districts also had to strategize and prepare for education delivery during the 2020-2021 academic school year despite an uncertain future, particularly regarding how the Coronavirus-19 pandemic would impact the US in fall of 2020. This variety of responses to the Coronavirus-19 pandemic resulted in a plethora of terms used to describe how public education is delivered such as online learning, remote learning, distance education, distance learning, and many more. Remote learning and distance education/learning

encompass both online education and paper-and-pencil materials distributed to families, while online learning is specific to education delivered virtually using the internet. Each year (2020, 2020-2021 academic year, 2021-2022 academic year, 2022-2023) had unique challenges related to the Coronavirus-19 pandemic and online education. For example, teacher's comfort with teaching online was likely much higher during the 2021-2022 academic year compared to the beginning of the pandemic in early 2020. Their increased comfort and experience with providing virtual education services possibly impacted how effectively they provided education. School psychologists are important educators within the public school system and work with students with high behavioral and/or mental health needs (National Association of School Psychologists [NASP], n.d.-c). This paper further explored those challenges as they related to school psychological service provision in United States public education.

Education Delivery During the Coronavirus-19 Pandemic

Traditionally, the majority of public education in the United States has been conducted in-person, with teachers and students in a building together. However, this rapidly changed when the Coronavirus-19 pandemic resulted in stay-at-home orders for many communities around the world (United Nations Educational, Scientific and Cultural Organization [UNESCO], n.d.). During the 2020-2021 school year, a variety of modalities were utilized to provide instruction to students. Some schools even transitioned between in-person and distance learning multiple times during the year, typically due to outbreaks of the virus at the school (Garet et al., 2020). Educators reported increased challenges in providing online education compared to traditional in-person instruction. These obstacles encompassed difficulties with maintaining student accountability, providing high quality instruction, and motivating students to engage in academic

content (Marshall et al., 2020). These examples underscore the complex challenges that educators faced throughout online learning and during the Coronavirus-19 pandemic.

Special education service providers reported that their students needed additional support during online learning and throughout the Coronavirus-19 pandemic, while simultaneously reporting decreased confidence in the efficacy of their services (Davis, 2021). The increased challenges teachers reported indicate that they required additional support throughout the Coronavirus-19 pandemic in order to maintain effective educational service provision to all students. In response to heightened teacher needs throughout the Coronavirus-19 pandemic, school psychologists likely increased the amount of time spent in consultation and collaboration with teachers in order to provide some of this needed support.

School psychologists are important educators within United States schools, as they serve primarily special education students who have needs beyond those of their peers in general education. While school psychology practitioners may operate in private schools or within higher education, the majority of United States school psychologists work within public primary and secondary schools. School psychologists were required to continue service provision to schools operating throughout the Coronavirus-19 pandemic. School psychologists are trained in conducting academic, cognitive, and socio-emotional assessments and developing and providing behavioral and mental health interventions, among other skills, as described by the National Association of School Psychologists (n.d.-c). School psychologists use consultation and collaboration with teachers, administrators, parents, and others to help best support students (NASP, n.d.-c). School psychologists working in public schools, rather than other settings, such as universities, will be the focus of this paper.

School psychologists in the United States have a variety of roles and responsibilities within educational systems. Research with school psychologists indicate that assessment, intervention, and consultation/collaboration are the three main areas of service provision, as determined by how much time school psychologists have reported spending on different activities (Hosp & Reschly, 2002; Larson & Choi, 2010). Prior to the Individuals with Disabilities Education Act (IDEA), research on how school psychology practitioners spent their time found that school psychologists spent roughly 18 to 27 hours per week in assessment services, the area in which most of their time was spent (Hosp & Reschly, 2002). Intervention service was the next highest area of time spent, ranging from 6.6 to 9.9 hours per week spent in intervention services across US regions (Hosp & Reschly, 2002). More recent research has found a shift in services post-IDEA implementation where school psychologists reported more time spent on intervention services than assessment (Larson & Choi, 2010). Overall, school psychologists reported spending the vast majority of their time in assessment and intervention services, followed by consultation and collaboration (Hosp & Reschly, 2002; Larson & Choi, 2010). It is expected that the proportion of time school psychologists spent in these services areas fluctuated throughout the Coronavirus-19 pandemic, as schools transitioned between distance and traditional, in-person learning, and as both student and teacher needs changed. Although school psychologists were expected to continue providing services throughout the pandemic, their ability to do so changed due to pandemic-related limitations, thus, impacting how much time they spent in different service areas.

As their services are mandated in IEPs, or individualized education plans, school psychologists had to continue providing services as long as their school was providing educational services throughout the Coronavirus-19 pandemic. This means that for all schools

that transitioned to distance learning, their school psychologist(s) had to transition to remote service delivery as well. This transition occurred very rapidly in some districts and introduced several concerns related to online service provision for school psychologists, including a lack of appropriate training, maintaining confidentiality, and more. It is likely that many school psychologists received very little training in online service delivery prior to the Coronavirus-19 pandemic. In general, programs that train in psychotherapy have included minimal or no training in online service delivery (Taylor et al., 2020). Confidentiality, privacy, compliance with the Health Insurance Portability and Accountability Act (HIPPA) and the Family Educational Rights and Privacy Act (FERPA), and access to technology are just a few of the concerns school psychologists must consider when providing online services. For example, students having a confidential space with working technology is a challenge that school psychologists may have limited ability to change. A variety of potential problems arise with school psychologists relying on media-based means to provide their services. During the Coronavirus-19 pandemic, school psychologists were required to rapidly convert their services to telehealth services despite having minimal training, regulations, and research to guide them (Brock & Holland, 2021; Farmer, McGill, Dombrowski, Benson, et al., 2020). As educators rapidly transitioned to online and/or remote education, they possibly experienced related time constraints that affected their ability to find and utilize research and information to guide their decision-making. Due to the reliance on technology and videoconferencing throughout the pandemic, it is imperative to better understand how technology has been utilized and to investigate best practices when utilizing technology for school psychological service provision. In addition to concerns with a lack of training in providing services online, there are a variety of other concerns that arise when considering

remote learning, such as the feasibility of providing those services and the efficacy of those services.

There are many concerns a school psychologist must consider when providing virtual services. In-person services are often considered necessary when psychodiagnostic and neuropsychological assessments are conducted due to test standardization procedures (Farmer, McGill, Dombrowski, Benson, et al., 2020). Test standardization refers to how the test was developed and initially administered to the normative groups that were used to develop the test scores, which an individual's performance is then compared against to evaluate their performance compared to their same-age peers (Urbina et al., 2014). For test results to be considered valid, assessments should be administered in the same way it was administered to the standardization sample (Urbina et al., 2014). Despite a variety of assessments being available online or in a technology-based format, many of these assessments are generally considered to be more valid when administered in-person due to a variety of reasons, such as administrator control over the testing environment (Farmer, McGill, Dombrowski, McClain, et al., 2020). Furthermore, many assessments require in-person administration or assistance, often due to modeling and/or use of manipulatives. Other concerns and challenges that school psychologists faced as a result of the transition to remote education include a lack of training, inability to maintain confidentiality and HIPPA compliance, and assessment administration feasibility, reliability and validity. It is important to better understand how school psychology practitioners mitigated those concerns throughout the Coronavirus-19 pandemic. This information will be useful for school psychologists who primarily provide virtual services and in future crises that necessitate social distancing and remote education.

National Association of School Psychologists Practice Model

To guide school psychologists in their work and training, the National Association of School Psychologists provides a practice model with a description of the services school psychologists may provide. This model was updated in 2020, thus, the previous model, which was the primary model in 2019, was used to guide this research investigation because this would have been the model school psychologists were familiar with during the transition to remote learning. This model includes Foundations of Service Delivery, Practices that Permeate All Aspects of Service Delivery, and Direct and Indirect Services for Children, Families, and Schools. This outline of services for school psychologists guides school psychologists by explicating the areas of skills and knowledge needed to be a successful practitioner.

The NASP practice model prior to 2020 was organized into three primary sections; Foundations of Service Delivery, Practices that Permeate All Aspects of Service Delivery, and Direct and Indirect Services for Children, Families, and Schools. Foundation of Service Delivery are Diversity includes Development and Learning, which refers to multicultural competency, and Legal, Ethical, and Professional Practice, which refers to current laws, regulations, and professional ethics codes, and Research and Program Evaluation. These three areas are considered to be the underpinning expectations that ensure competency and ethicality within school psychology. While it is imperative to understand the roles school psychologists fulfill in their schools, it is also important to understand how they adapted throughout the Coronavirus-19 pandemic and how that relates to their feelings about their service provision throughout the pandemic.

Consultation and Collaboration During the Coronavirus-19 Pandemic

School psychologists possibly increased their time spent in consultation and collaboration services as a result of increased student and teacher needs during the Coronavirus-19 pandemic and online learning. However, much of the research on consultation and collaboration services during the pandemic has focused on healthcare settings, although concerns and recommendations for physical health consultation may translate to mental health consultation. Research comparing nurse-client interactions in face-to-face, video-based, and telephone-based consultation services has indicated a preference for video-based consultation over telephone-based consultation, with mixed preferences for video-based versus face-to-face consultation (Islind et al., 2019). Interestingly, both nurses and clients indicated that clients appeared comfortable using the technology, particularly after gaining experience (Islind et al., 2019). Furthermore, applied behavior analysts have effectively provided consultation services to parents via videoconferencing (Wacker, Lee, Padilla Dalmau, Kopelman, Lindgren, Kuhle, Pelzel, & Waldron, 2013). This research indicates that videoconferencing is most likely an acceptable form of consultation for adults to use and is generally preferable over phone-based consultation. However, the amount of training, experience, and research related to virtual consultation services is limited within school psychology and individuals may experience initial challenges when engaging in video-based consultation (Islind et al., 2019). Furthermore, while adults are generally assumed to have the cognitive capacity and knowledge to engage in videoconferencing, this assumption is not applicable to children. Children's ability to engage in videoconferencing is affected by their age, cognitive functioning, disabilities, experience with technology, and more. There is minimal to no research on consultation services during the Coronavirus-19 pandemic specific to school psychology; however, school psychology

researchers hypothesized that school psychologists would experience an increased need for parent consultation services during the pandemic due to increased inattention and hyperactivity among children during this time (Song et al., 2020; Wendel et al., 2020). It was possible that school psychologists increased their amount of time spent in consultation and collaboration services in response to the Coronavirus-19 pandemic and increased student, teacher, and family needs for educational and mental health support.

Assessment During the Coronavirus-19 Pandemic

Throughout the Coronavirus-19 pandemic, providing virtual assessment services was potentially the most challenging aspect for school psychologists because the many of assessments school psychologists use are designed and standardized for in-person administration. The National Association of School Psychologists (2020c) recommended only administering assessments that are necessary for eligibility determination and state that assessments should be administered in the same way they were standardized throughout the Coronavirus pandemic. These organizations maintain that deviating from the standard administration (such as administration via telehealth or videoconferencing), leads to doubt about the utility and accuracy of the findings (Farmer, McGill, Dombrowski, Benson, et al., 2020; Wright et al., 2020). It is likely that throughout the Coronavirus-19 pandemic school psychologists either ceased providing assessment services, provided virtual assessment with some deviation from standardization, or continued to provide in-person assessment services despite infection rates and stay-at-home recommendations. In fact, delayed testing was widely recommended from various school psychology organizations in favor over telehealth assessment (Farmer, McGill, Dobrowski, McClain, et al., 2020; Herbert, 2020). For school psychologists who worked under a stay-at-home order, it is likely that many assessments were simply not conducted during those times.

The inability to complete assessments has severe implications on ability to label a child with a disability and for completing evaluations within the mandated time-limit, including the delay of special education service delivery. It is possible that the amount of time school psychologists spent in assessment services decreased during the Coronavirus-19 pandemic due to an inability to test students face-to-face.

Intervention During the Coronavirus-19 Pandemic

Providing intervention services online was a big transition for the vast majority of school psychologists in the United States. Due to the lack of training in online provision of intervention services, school psychologists are significantly less prepared for online intervention delivery than they are for in-person intervention delivery. Furthermore, there was a lack of research on evidence-based online interventions at the beginning of the Coronavirus-19 pandemic. Lastly, there were concerns related to online service delivery, regardless of the type of service, including but not limited to confidentiality, access to technology/internet, and attendance.

Although little research is available on school psychological intervention services provided to students in an online context, other areas of psychology have investigated virtual intervention services. For example, counseling psychology has utilized teletherapy via videoconferencing and phone calls to provide services to individuals with limited access to these services, such as individuals living in rural areas or those with movement-limiting disabilities, although not without controversy and hesitancy from the field. Sequeira et al. (2020) reported on their transition of counseling services from in-person to teletherapy and provide a variety of suggestions for other therapists transitioning to primarily teletherapy services. These suggestions were based upon the researchers' experiences in their transition around privacy, counselor environment, feedback, working with children and adolescents and more. For example, the

authors discussed clients going on walks or using chat features to communicate with the counselor without being overheard and encouraged self-awareness around potential distractions in the environment for both the client and the clinician (Sequeira et al., 2020). Taylor et al. (2020) provided further recommendations for utilizing telehealth through the development of both policy-level and systems-level recommendations to aid in successfully relying on telehealth services for psychotherapy. All these studies acknowledged the need for additional research on psychological telehealth services to further understand how it compares to in-person service delivery and indicated the presence of challenges with teletherapy experienced by both clients and clinicians.

While additional research with online mental health and behavioral intervention in school psychology is imperative, there has been research on telehealth within the mental health field, primarily with adults as participants. For example, a meta-analysis on telehealth services with medical populations struggling with anxiety and/or depression found positive effects of media-delivered interventions for general quality of life indicators (e.g., physical well-being, mental well-being), including efficacy for skills-based Cognitive Behavioral Therapy (CBT; Durland et al., 2014). This shows some effectiveness of teletherapy for mental health intervention services. In addition, clients who received services via telehealth had lower rates of attrition, or drop-out, than clients who received in-person services (Durland et al., 2014), perhaps indicating that convenience is a large factor in client attrition. These results indicate that teletherapy has the potential to be an effective treatment option for adults, although less research exists with children and online mental health intervention services.

Minimal research has been conducted with children receiving telehealth services and most has been conducted with medical populations, such as children with asthma or HIV.

Research with children ages 6 to 13 with asthma who received either in-person care or virtual care found very comparable results between the two groups, particularly in terms of quality of life and asthma knowledge, with individuals in the virtual group adhering to some asthma-related recommendations more closely than the in-person group (D. S. Chan et al., 2007). Similar, positive results have been found with transgender youth diagnosed with HIV. These participants reported high levels of satisfaction with the intervention, indicating acceptability of telehealth services among this population (Stephenson et al., 2019). Overall, research on online mental health interventions has indicated that most children are likely to gain some benefit from intervention services, even when delivered online. Research is needed to better understand how much benefit children gain from teletherapy, particularly children with disabilities and those in their preschool and early elementary years.

The Coronavirus-19 Pandemic and Mental Health

Amidst adapting to pandemic-related restrictions and changes, youth and adults experienced increased levels of psychological distress For example, across the United States and around the world, adults and youth reported increased mental health symptomology, particularly anxiety and depression, during the Coronavirus-19 pandemic, especially during stay-at-home orders or lockdowns (Craig et al., 2020; Daly & Robinson, 2021; Daly et al., 2022; Hawke, Barbic et al., 2020; Pieh et al., 2021). Among adults, nearly 41% of respondents reported experiencing one or more “mental or behavioral health condition” at the end of June 2020 (Czeisler et al., 2020, p. 1). Groups that reported more mental health and/or behavioral health symptomology included essential workers, young adults, and racial/ethnic minorities (Czeisler et al., 2020). At least 60% of youth reported that they experienced moderate, or more severe, worry about contracting the COVID-19 virus (Xie et al., 2020). Youth who had previously been

exposed to Adverse Childhood Experiences were at increased risk for post-traumatic stress symptoms throughout the Coronavirus-19 pandemic (J. Guo et al., 2020). Adverse Childhood Experiences, or ACEs, refers to a variety of traumatic experiences that can occur in childhood, such as physical abuse or drug abuse in the home (Filitti et al., 1998). Overall, the Coronavius-19 pandemic was widely touted as a time of increased stress and change for everyone and created a heightened need for adaptation. This increased need for adaptation combined with increased mental health challenges potentially affected feelings of efficacy and success for school psychologists.

Psychological Adaptation

Due to the plethora of lifestyle changes and increased health risks that accompanied the Coronavirus-19 pandemic, individuals around the world were challenged to adapt to their new "normal." Psychological adaptation has been defined as the beneficial changes one makes in their response to an environmental stimulus (Bjorklund, 2015). This is distinct from maladaptive coping, which are changes one makes that result in psychological distress at some point in the future (Lazarus & Folkman, 1984). Thus, whether a change is adaptive or maladaptive is determined by the consequences of that change.

Models of psychological adaptation have proposed a variety of factors that are related to one's psychological adaptability, although this research has been completed with survivors of disasters, rather than everyday events or health pandemics (Pérez-Fuentes et al., 2020). For example, anxiety, social support, depression, tolerance to uncertainty, locus of control, alertness and awareness, stress management, coping, emotional management, and cognitive flexibility have all been proposed as factors related to psychological adaptation (Pérez-Fuentes et al., 2020). Research has found various behaviors and perspectives to be beneficial in one's psychological

adaptation to the Coronavirus-19 pandemic, such as emphasizing the benefits increased time at home, trusting in science and medicine, and sticking to a routine (Morales-Vives et al., 2020; Orgilés et al., 2021; Pigaiani et al., 2020). Women experienced more negative symptomology due to the pandemic compared to men, indicating a potential gender difference in psychological adaptation to the pandemic and its effects (Morales-Vives et al., 2020). As women make up the majority of school psychologists, it is possible that many school psychologists struggled to adapt to the Coronavirus-19 pandemic and its subsequent changes and restrictions (Castillo et al., 2013). Struggling to adapt amidst the many pandemic-related changes may have affected individual school psychologists' feelings of self-efficacy in their service delivery throughout the pandemic. School psychologists who experienced more negative mental health symptoms during the Coronavirus-19 pandemic may have had increased difficulties providing effective services, a more negative perspective on their service delivery during this time, or both. Furthermore, they may have felt less capable of providing their services throughout the pandemic compared to school psychologists who experienced minimal to no mental health concerns during this time.

Crisis Self-Efficacy

Throughout the Coronavirus-19 pandemic, school psychologists were required to adapt as they adjusted how they provided services, experienced increased health risks, and navigated life under stay-at-home mandates. As they adapted to this variety of changes, their feelings of efficacy regarding their service provision likely fluctuated. Self-efficacy refers to one's feelings about their personal levels of competence in completing a specific task (Bandura, 1977). School psychologists have feelings of self-efficacy for their various roles and responsibilities, such as their response to crises and ability to maintain services throughout the Coronavirus-19 pandemic (Aspiranti et al., 219; Guiney et al., 2014; Runyon et al., 2017). Crisis self-efficacy refers to

one's self-efficacy regarding their ability to respond to a crisis situation (Alba & Gable, 2011; Allen et al., 2002; Olinger Steeves et al., 2017). Research on crisis self-efficacy with educators emphasized that training and experience are critical factors that affect one's feelings of crisis self-efficacy (Alba & Gable, 2011; Allen et al., 2002; Olinger Steeves et al., 2017). Since worldwide health pandemics are not a commonly experienced crisis for educators, it is likely that their training and experience in this area is limited. It is likely that educator's crisis self-efficacy for responding to the Coronavirus-19 pandemic was initially low, although this may have fluctuated as educator's grew accustomed to the pandemic-related changes and their health risk and symptoms changes. In addition to a lack of training and experience with online learning, increased students and teacher needs combined with increased mental health challenges for the general population likely affected school psychologists and their crisis self-efficacy as they worked throughout the pandemic.

Significance of the Problem

As schools and school psychologists rapidly transitioned to remote learning in response to the Coronavirus-19 pandemic, it is critical to investigate how school psychological practice adapted. This encompasses how school psychologists transitioned their services, how school psychology services were delivered online, and areas of challenges and success. This research can inform current and future school psychologists engaging in online and/or remote service delivery, as well as professionals providing online services in related fields, such as counseling and education. Furthermore, school psychologists' feelings of efficacy regarding their ability to provide effective services online and during the pandemic may have affected their service delivery. It is important to investigate the school psychologists' self-efficacy during this time as

well as their perceptions of service delivery to inform future practitioners and researchers in times of crisis.

Purpose

The purpose of the present study was to investigate how school psychological services in public United States primary and secondary schools changed and adapted in response to the Coronavirus-19 pandemic. Specifically, assessment, intervention, and consultation/collaboration services, time spent on these services, and concerns related to these services were investigated through a survey. This research is important to contribute to data and empirical evidence that school psychologists can use to guide them in their online service provision. This investigation will provide valuable information on how school psychologists provided services throughout the Coronavirus-19 pandemic, resources they have used, and the percentage of time spent in the 3 main service areas of school psychology (i.e., consultation and collaboration, assessment, and intervention). Furthermore, the present study hoped to identify any relationships between school psychologists' feelings of crisis self-efficacy and their perceptions of their services' efficacy.

Q1 How has the amount of time school psychologists spent in intervention, assessment, and consultation services changed in response to transitioning online?

H1 The amount of time school psychologists spent on assessment services reduced when schools first transitioned online in response to the Coronavirus-19 pandemic.

H2 The amount of time school psychologists spent on intervention services reduced when schools first transitioned online in response to the Coronavirus-19 pandemic.

H3 The amount of time school psychologists spent on consultation/collaboration services increased when schools first transitioned online in response to the Coronavirus-19 pandemic.

H4 The amount of time school psychologists spent working on assessment increased in the 2020-2021 school year.

H5 The amount of time school psychologists spent working on intervention increased in the 2020-2021 school year.

Q2 How is school psychologists' adaptation to the Coronavirus-19 pandemic and current symptomology related to their current feelings of self-efficacy?

H6 School psychologists' crisis self-efficacy for the Coronavirus-19 pandemic mediates the relationship between their reported mental health symptomology and their beliefs about the effectiveness of their services online versus in person.

CHAPTER II

REVIEW OF THE LITERATURE

In order to gain insight into the Coronavirus-19 pandemic's pervasive influence on education and school psychology in the United States, as well as the surrounding contextual factors, a literature review was conducted. A review of school responses to the Coronavirus-19 pandemic, the National Association of School Psychologists' (NASP) practice model, and NASP concerns and recommendations related to online education and service delivery in the areas of efficacy and validity, access, ethics and fidelity, and mental health impacts provided the context in which the present study is interested. A review on psychological adaptation and crisis self-efficacy for educators throughout the Coronavirus-19 pandemic, as well as research on general and special education delivery throughout the pandemic, provided current research on educational services since March of 2020. Research on the pandemic's effects on adult and youth mental health, and youth behavior and academic performance and engagement provided information about the variety of challenges educators have faced during the Coronavirus-19 pandemic. Lastly, school psychologists' service delivery throughout the Coronavirus-19 pandemic in the areas of consultation and collaboration, assessment, and socioemotional and academic intervention was reviewed.

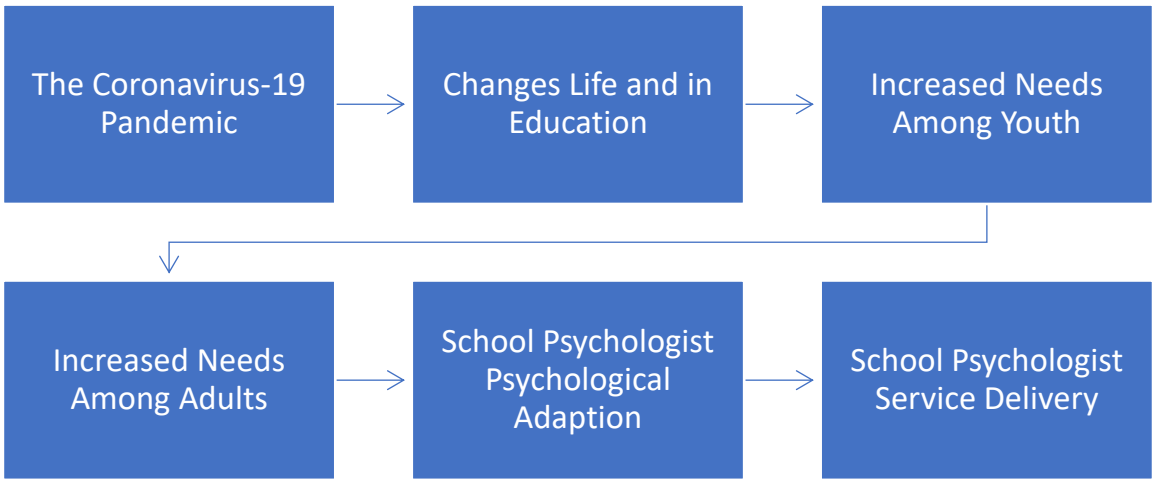
Theoretical Orientation

As the Coronavirus-19 pandemic resulted in a plethora of changes and adjustments globally. Due to increased needs for adaptation, children and adults experienced amplified mental health needs. Children experienced increased academic needs as well. It is likely that

adult and children's increased mental health and academic challenges led to an increase in requests for support by school psychologists. As a result of this additional need for support, school psychologists' psychological adaptability to the Coronavirus-19 pandemic may have been limited. In addition, school psychologists' own mental health symptoms related to anxiety and depression possibly affected their adaptability, and potentially affecting their perceptions of their service delivery during the pandemic. A diagram of this process is pictured in Figure 1.

Figure 1

Process of the Coronavirus-19 Pandemic Impacting School Psychological Service Delivery



The Coronavirus-19 Pandemic and Changes in Education

Coronavirus SARS-CoV-2 is a novel virus that began spreading around the world in early 2020. This is colloquially referred to as COVID-19 and officially became a pandemic in March of 2020 due to its ability to quickly spread and cause harm, and even death, among humans (Cucinotta & Vanelli, 2020). In the first few months of 2020, rates of COVID-19 infections began increasing to the point where, by the end of March, it was estimated that more than 90% of the United States population was living with a stay-at-home order. This was commensurate with

many communities around the world. Stay-at-home orders asked residents to stay in their homes and only leave when absolutely necessary, as well as socially distance when around others. In response to stay-at-home mandates, the vast majority of schools in the U.S. ceased in-person learning. Overall, school closures affected an estimated 1.38 billion students around the world in March of 2020 (United Nations International Children's Emergency Fund [UNICEF], n.d.). In the United States, all 50 states experienced mandated school closures, with only Montana and Wyoming allowing school districts the option to re-open after initial closures during the 2019-2020 year (Ballotpedia, n.d.). In response to stay-at-home orders, some school districts transitioned to online learning, while others effectively ended the 2019-2020 school year (Ballotpedia, n.d.). Schools and districts varied in how quickly they were able to respond to the Coronavirus-19 pandemic-related closures. For example, some districts took longer than others to ensure that all students had adequate access to the necessary technology, or otherwise provide physical learning materials to students. Some school districts may have extended their spring breaks in order to plan an initial response to the Coronavirus-19 pandemic. This resulted in highly variable education delivery across the United States during this time.

Concerns with Education During the Coronavirus-19 Pandemic

During the Coronavirus-19 pandemic, accessing distance or online education appeared more challenging for some students than others due to mental health, disabilities, home environments, and other factors based on educator reports about attendance, engagement, and other factors (Midcalf & Boatwright, 2020; Parmigiani et al., 2020). Educators also had the compounded stress of continuing their teaching without having students in their classrooms during a global pandemic. In March of 2020, the United States Department of Education released a statement affirming IDEA and the delivery of free and appropriate education, or FAPE, to

students with disabilities during remote learning to the greatest extent possible (Jameson et al., 2020). This meant that educators were still expected to provide effective general and special education services through remote means. For teachers, it was more difficult to monitor attention, attendance, and work completion through remote means. In addition, educators had prepared lessons and materials for in-person learning and were required to quickly adapt all curricular materials to be presented and completed virtually. This presented a variety of challenges and concerns for educators and school psychologists, including teaching to young students, limited time, and student access to technology and to free and reduced lunch meal services.

As school transitioned online, an array of concerns with online education and special education services arose. Students having a quiet place to learn at home, student attendance, student access to learning materials, and more were all concerns educators had to address throughout the Coronavirus-19 pandemic and distance learning. Access to technology was likely a concern in nearly every school district in the United States that decided to provide online learning during the Coronavirus-19 pandemic. Public schools that provided online education had to ensure that all students had adequate access to the learning materials to ensure they were providing free and appropriate public education. This meant checking that every child or household had access to internet and a computer, or to provide paper versions of the materials. Schools may have had to quickly plan a way for families to pick up laptops and other materials from the school while maintaining social distancing and keeping the school building closed to the public. Overall, schools experienced a plethora of concerns with student access to technology and other materials during the Coronavirus-19 pandemic, including meals.

Schools with students who received free and reduced lunch services likely were concerned about their students receiving enough food to eat while at home. Prior to the Coronavirus-19 pandemic, over 29.6 million students in the United States received free or reduced lunch services each day (School Nutrition Association, n.d.). Many schools sent students home with food on the weekends or provided breakfast at little or no cost to students/families. These programs help ensure that students receive adequate nutrition and prevent hunger from impeding students' learning. It was reported that the number of meals received by students during the Coronavirus-19 pandemic did reduce substantially, despite efforts from districts to maintain meal supports (School Nutrition Association, n.d.). This indicates that providing meals to families during the pandemic was a priority for schools and that schools were able to develop systems to get families these meals and educational materials.

Another significant concern during online education and the Coronavirus-19 pandemic was attendance. Interviews with special education providers in Southern California during the Coronavirus-19 pandemic indicated significant concerns regarding student attendance, noting decreases in student attendance, engagement, and in the quality of time spend with students as some of the challenges they experienced (Davis, 2021). It may have also been challenging for school psychologists to work on certain goals with students, thus limiting students' access to appropriate interventions. For example, it was likely challenging to work on goals related to a student's behavior in the classroom with fidelity and efficacy. Decreased student attendance and engagement, combined with increased difficulties working on specific IEP goals (e.g., increasing on-task behavior in a group setting), likely limited the growth school psychologists and other educators were able to affect. This difficulty may have had a negative impact on how effective educators felt about their service provision throughout the Coronavirus-19 pandemic.

Research on Education During the Coronavirus-19 Pandemic

As previously discussed, education in the United States was significantly disrupted by the Coronavirus-19 pandemic. The changes in education delivery and academic expectations were arduous for many teachers and staff. As a result of increased rigors in delivering effective education and special education services, it is likely that there was an increase in teachers requesting support from school psychologists during this time. This potentially occurred due to difficulties engaging students in virtual education, difficulties regulating students' attention during virtual education, and concerns with special education students' learning and growth while utilizing online education, and more. Between March 2020 and May 2020, approximately 90% of Americans were living in an area with a stay-at-home order due to the Coronavirus-19 pandemic (UNICEF, n.d.). Stay-at-home mandates resulted in many school districts rapidly transitioning to distance learning (Ballotpedia, n.d.). In 2021, the vast majority of states permitted individual school districts to determine if they provided online education and how it would be implemented (e.g., alternating schedules, half days, etc.). This freedom for school districts resulted in a wide variety of ways students are engaged in their learning throughout the Coronavirus-19 pandemic, including the potential for students to switch between online and in-person learning (Garet et al., 2020).

The American Institutes for Research (AIR) conducted research with United States schools to detail their responses to the Coronavirus-19 pandemic (Garet et al., 2020). This research detailed learning provisions for the 2020-2021 school year. AIR's National Survey of Public Education's Response to COVID-19 for the 2019-2020 school year received responses from 474 school districts around the United States (Garet et al., 2020). Results from the survey showed response differences between high and low poverty school districts, as well as between

rural and urban school districts. Overall, survey results showed that students were expected to spend an average of 2 to 3.5 hours per day on instructional activities, and this expectation increased with age and grade level. Additionally, low-poverty school districts tended to report higher expectations for the amount of time students should be spending on academic activities across grade levels (Garet et al., 2020). Significant differences across all grade levels were found for the modalities in which distance education was provided, with high-poverty and/or rural school districts supplying more physical learning materials compared to low-poverty and urban school districts (Garet et al., 2020). This is unsurprising considering the lack of access to adequate technology in both impoverished and rural communities in the United States (Federal Communications Commission, 2012). High-poverty and rural school districts were also more likely to focus on previously taught, rather than new, content compared to low-poverty and urban school districts. On average, nearly 20% of reporting districts primarily reviewed previously taught content for grades K-5 and 13% of districts for grades 6-12 engaged in this practice as well (Garet et al., 2020). This means that students in high-poverty and rural areas had less access to technology that supported their learning and were exposed to less new content during online learning. From that, it is logical to presume that students from rural and high-poverty areas will be further behind academically during the 2021-2022 school year compared to their urban and low-poverty peers. Students in high-poverty or rural schools were more negatively impacted by changes in education delivery and focus during distance learning. These results indicate that school psychologists across the nation may have had different responsibilities when it comes to supporting students throughout the Coronavirus-19 pandemic because there was such diversity in education provision in the United States during this time. In addition, school psychologists who serviced low-income and/or rural schools should have been mindful of the exacerbated effects of

these educational changes on these populations and helped to provided needed supports to these populations throughout the Coronavirus-19 pandemic and upon returning to in-person classrooms.

Educators have provided insight into how transitioning to, and utilizing, online learning worked for themselves and their students. Interviews with teachers found that nearly all participants (92.4%) had not provided educational services online prior to the Coronavirus-19 andemic and that these educators experienced significant encumbrances with transitioning to and teaching virtually (Marshall et al., 2020). These teachers noted that they had to do their own research to prepare for online instruction (Marshall et al., 2020). They reported hardships with holding students accountable for their work, meeting with students, and with the restrictions placed on their curriculum that only allowed for the review of previously taught content (Marshall et al., 2020). These results indicate that educators felt more constrained in their work than before the pandemic, most likely due to providing virtual education. This may have then affected their feelings of efficacy, motivation, and engagement. When experiencing increased difficulties, teachers may have referred to school psychologists to request consultative support. Types of consultative requests from teachers may have included behavioral support for a child, classroom management or instructional support, or even for their own psychological distress. As educators experienced more challenges throughout the Coronavirus-19 pandemic and online education, it is likely that school psychologists experienced an increase in teacher needs and requests for support and consultation during this time.

As previously discussed, due to sudden school closures and transitioning education online, many school districts across the nation decided to either end the school year early - typically after spring break - or provide education that focused primarily on already taught

content (Ballotpedia, n.d.). Using data on absenteeism, school closures, and summer learning patterns, researchers hypothesized that students would enter the 2020-2021 school year with significant deficits in reading and math (Kuhfeld et al., 2020). Specifically, they hypothesized that students would begin the 2020-2021 year with about 63-68% of the expected content and understanding they typically would have in reading, and with less than 50% of expected content projected for math (Kuhfeld et al., 2020). Other researchers made similar projections (Azevedo et al., 2020; Bao et al., 2020; Murat & Bonacini, 2020). This means that, upon starting the 2020-2021 schoolyear, students were woefully underprepared for grade-level content and teachers likely needed to spend significantly more time reviewing the previous grade's content and implementing academic interventions prior to starting grade-level content. These projections were supported by data as well. Standardized assessment data from Belgium showed significantly lower academic scores in 2020 than in previous years for both math and language performance (Maldonado, 2020). Qualitative data from teachers have also indicated significant concerns about learning regression when students return to school in Fall 2020 (Midcalf & Boatwright, 2020). As the 2020-2021 academic year was filled with school closures (Ballotpedia, n.d.) and likely increased student absences, the academic delays continued into the 2021-2022 school year and possibly further.

Prior to the Coronavirus-19 pandemic, the majority of online education in the United States was available for higher education. This is where most of the research on student engagement and learning in online courses has focused. Historically, online courses have had drop-out rates 10% to 20% higher than in-person classrooms (Herbert, 2006), with an estimated 40% to 80% of college students dropping out of online courses (Smith, 2010). Furthermore, students in online courses perform significantly worse academically than their peers in face-to-

face learning environments (Molnar et al., 2019) and many researchers caution against utilizing online education for disadvantaged youth, such as individuals from impoverished families and communities (Morgan et al., 2015; Toch, 2010). Taken together, these results indicate numerous concerns with relying on online education for students of all ages and especially for students from certain disadvantaged groups.

Research on academic achievement prior to the Coronavirus-19 pandemic indicated a long history of an academic achievement gap between White students and their Black and/or Hispanic peers that begins at school entry and possibly even grows throughout schooling (Cheadle, 2008; Crosnoe, 2005; Entwisle et al., 2005; Fryer & Levitt, 2004; Jencks & Phillips, 2011; Lee & Burkham, 2002; Potter & Morris, 2017; Yeung & Pfeiffer, 2009). Many researchers predicted that school closures and online education would widen the achievement gap between children of color or with low socioeconomic status and children that are White or high socioeconomic status (T. C. Anderson, 2020; Bacher-Hicks et al., 2021; Rothstein, 2020). Children from lower socio-economic status homes and/or families of color are less likely to have access to internet (J. M. Anderson, 2014) and to educational materials at home, which further exacerbates the academic performance discrepancy between students from high- and low-socioeconomic status backgrounds and/or race (Cheadle, 2008). Additional research is needed to explicate how the Coronavirus-19 pandemic contributed to academic performance differences between students from low socioeconomic status home, families of color, and families from rural communities.

In qualitative investigations specific to the Coronavirus-19 pandemic, teachers reported decreases in work completion and that some students lacked engagement with their education. They reported that students were failing to log into the necessary systems and/or respond to

emails (Midcalf & Boatwright, 2020). Furthermore, sixty percent of responding teachers reported having students who were not submitting their assignments (Midcalf & Boatwright, 2020). These teachers believed their students would be better supported through face-to-face help, whether to support with transitioning to online education, technology issues, or explaining content (Midcalf & Boatwright, 2020). Parents reported that their children did not learn as much online compared to when they were in person, although 80% of parents reported believing that their child was receiving adequate support from their teacher (Midcalf & Boatwright, 2020). This may or may not have fluctuated as students became increasingly familiar with learning remotely and as content moved from previously taught information to new information. Initial research indicates that learning was negatively affected by online learning and pandemic-related changes to education and that students are less engaged with learning online compared to in-person. Overall, significantly more research is needed on the accessibility, feasibility, and efficacy of online learning throughout the Coronavirus-19 pandemic, particularly for grades K-12.

Research on Special Education During the Coronavirus-19 Pandemic

In the United States, special education services are required to be provided by public schools when they are open, which was reaffirmed by the USDE in March of 2020 (Jameson et al., 2020). Schools were urged to develop strong partnerships with families during the Coronavirus-19 pandemic, as well as to collaborate with other professionals utilizing virtual- or phone-based technologies to help ensure that students continued to grow in their academics (Jameson et al., 2020). Educators and administrators should have ensured that they were collecting and utilizing data to inform decision-making for both students receiving special education services and for those who were evaluated but did not qualify (Jameson et al., 2020). A variety of professional organizations, including the National Association of School

Psychologists, advocated for the ethical and mindful use of assessment and evaluation procedures, and asked professionals to consider both test standardization and validation, as well as individual safety, when determining evaluation procedures (Jameson et al., 2020; NASP, 2020c). The requirement to maintain special education services and be mindful of valid, ethical assessment administration likely created a conflict for special education service providers who completed evaluations which required the use of assessments that necessitate in-person administration.

School psychologists and other educators likely utilized a variety of technologies in order administer assessments and provide other services throughout the Coronavirus-19 pandemic. Qualitative interviews with special education instructors and speech language pathologists in Southern California found that these educators utilized a variety of technologies in order to engage students in learning, such as Google Meet and Google Classroom, Boom Cards, Epic Books, and asynchronous learning materials during the Coronavirus-19 pandemic (Davis, 2021). "Asynchronous materials" refers to materials that students could access independently (e.g., websites with information, paper assignments, assignments in google classroom, etc.), while synchronous learning refers to the classroom coming together (virtually) at the same time (e.g., such as for a lecture). These special education teachers and speech language pathologists emphasized the value of programs that allowed them to monitor how long the student was logged onto online learning platforms and reported that distance learning was more effective for students who were able to successfully work independently (Davis, 2021).

Students who are able to learn independently are less likely to be higher needs students in the schools, meaning that students who are more successful in the online learning environment are likely already successful in the regular classroom. This also means that students who struggle

to learn in the regular classroom also struggled more to learn through online education during the Coronavirus-19 pandemic. These special education teachers and speech-language pathologists noted how their students needed more support, academically, behaviorally, and environmentally. Due to the increased needs and challenges experienced by special education students, such as executive functioning deficits and learning disabilities, combined with pandemic-related restrictions, these educators reported that they were unable to administer necessary assessments, that their services were delivered ineffectively, and they experienced challenges in acquiring reliable data for progress monitoring (Davis, 2021). Participants emphasized the amount of support and training they received from the school administration and district during this time, as well as how hard all educators were working to best support their students as strengths witnessed within their school systems during this time (Davis, 2021). In Italy, qualitative interviews with special education teachers highlighted collaboration with families and teachers, although they expressed that over 30% of families appeared uninterested in engaging with their child's teachers (Parmigiani et al., 2020). They acknowledged that many of their students experienced difficulties engaging with the online materials and maintaining their attention, while some students lacked access to the basic technologies needed to engage with the course (Parmigiani et al., 2020). Overall, a wide variety of resources were utilized throughout the Coronavirus-19 pandemic in order to provide online or remote special education services to students. Furthermore, it is clear that teachers and services providers experienced a variety of challenges in providing their services throughout the Coronavirus-19 pandemic and online learning.

Some school districts documented their challenges and successes in a narrative about their transition to distance learning, particularly for special education services. For example, a rural district in Texas discussed how they mailed out coursework, but then experienced

complications with the logistics of returning the work to the teachers for grading and feedback. This predicament resulted in an increase in communication between special education teachers and caregivers through a variety of methods, although this required documentation (e.g., phone, email, ClassDojo, etc.) and time (Tremmel et al., 2020). After utilizing paper-based coursework for a week, this Texas school district transitioned to virtual learning that included generalized content for each grade level. This resulted in the need for increased collaboration with teachers to ensure that special education students received their individualized content and/or accommodations (Tremmel et al., 2020). This narrative emphasized collaboration with community resources in order to help maintain services, such as food and nutritional support, and mental health support throughout the Coronavirus-19 pandemic in order to ensure adequate access to supports (Tremmel et al., 2020). This district also spoke of ceasing evaluations and an inability to make eligibility decisions due to insufficient data (Tremmel et al., 2020). Insufficient data were likely related to difficulties implementing and progress-monitoring interventions compounded by an inability to ethically administer assessments in standardized formats. This narrative emphasized collaboration at all levels of education, from district administration to teachers, families, and community resources (Tremmel et al., 2020). Another district in California discussed how they utilized applied behavior analysists from nonpublic agencies to collaborate with the school on ways to provide individualized services to special education students, which was directly provided up to 3 hours per day (Frederick et al., 2020). Overall, this research indicates school districts were initially challenged by transitioning both general and special education services online. However, through collaboration, research, and use of a variety of resources, schools managed to provide some special education services to students during the Coronavirus-19 pandemic and remote learning. However, these services may have been limited,

as some activities had in-person requirements and were unable to be done virtually or remotely. While both general and special education services transitioned online, the adults providing these services were also experiencing life during the Coronavirus-19 pandemic and were affected psychologically.

Concerns Regarding School Psychological Services During the Coronavirus-19 Pandemic

Many concerns regarding online assessment administration and validity arose in response to the Coronavirus-19 pandemic. While some assessments are easily accessible online for a parent, teacher, or student to complete, these are typically survey-type assessments where an individual can independently answer the questions without the examiner present (Farmer, McGill, Dombrowski, McClain, et al., 2020). For example, the Adaptive Behavior Assessment System (ABAS) is commonly completed online by parents and teachers to rate the behaviors of the student through answering Likert-scale questions. However, other assessments, such as many executive functioning and neuropsychological assessments, require the examiner to be a part of the assessment administration process. This may have been challenging or impossible to do over videoconferencing technology, such as the administration of a subtest that requires modeling of manipulatives (Farmer, McGill, Dombrowski, McClain, et al., 2020). In addition, school psychologists needed to consider how modifications for online assessment delivery influenced adherence to standardization procedures and reassess validity of their assessments (Farmer, McGill, Dombrowski, McClain, et al., 2020). In sum, there were many concerns related to the feasibility of administering assessments online and the validity of these assessments when administered virtually.

Virtual distance education, or online learning, has unique concerns and challenges compared to in-person learning that teachers, administration, and special service providers

experienced during the Coronavirus-19 pandemic. School psychologists, who have unique and critical roles within school systems and work with students experiencing significant academic, behavioral, and/or mental health challenges in schools, also experienced these difficulties and challenges when providing intervention services during the Coronavirus-19 pandemic. For example, evidence-based practices, as school psychologists utilize them, are often mental health and behavioral interventions that have been empirically validated, or shown to have effectiveness, through randomized controlled trials (Shernoff et al., 2017). However, the majority of evidence-based mental health interventions have been designed for in-person, pull-out services (Shernoff et al., 2017). This meant that school psychologists would take an individual or group out of class to have them engage in the intervention in a face-to-face format. Transitioning these interventions to be delivered online most likely required notable resources and time. Interventions designed for in-person instruction that are delivered online may not have the same level of efficacy compared to when delivered in-person. Furthermore, some students may be less likely to benefit from virtual services due to their functioning. For example, a kindergartener with significant hyperactive behaviors may not be able to engage with virtual intervention services due to their age, maturity, and behavioral regulation. These are just a few of the challenges and concerns that school psychologists experienced when transitioning their services online during the Coronavirus-19 pandemic.

In order to provide their services online, school psychologists likely utilized a wide variety of resources and tools to deliver their mental health services during the Coronavirus-19 pandemic, such as using PowerPoints to guide their lessons, and having a “check-in” type of conversations with their students via video conferencing, using online games, to name a few. This required time and may have limited the efficacy of an intervention due to differences

between online delivery and the intended delivery. In addition, if the intervention(s) school psychologists used prior to the Coronavirus-19 pandemic were not viable to implement virtually, the school psychologist may have had to quickly find another intervention that would be feasible in a virtual learning environment. Overall, school psychologists' intervention services were possibly less effective during the Coronavirus-19 pandemic than during typical, in-person education due to the difficulties in virtual delivery, changes made to interventions, student engagement online, and more.

Ethics was another area of many concerns and challenges with transitioning to and delivering education online. For example, school psychologists may not have Health Insurance Portability and Accountability Act (HIPPA) compliant storage in their homes for files. Access to confidential spaces was a challenge for both students and school psychologists. For example, a student who shares a bedroom and has siblings and parents working from home during the Coronavirus-19 pandemic may not have had a private room in their home that they could use for counseling. School psychologists, and other mental health professionals providing virtual counseling services, may have experienced concerns about being recorded without their knowledge and consent. Although recording another without their consent is legal in some states, it still is concerning to many practitioners. Adhering to appropriate state and federal laws regarding confidentiality and school psychologists' ability to maintain confidentiality and behave ethically may have been affected by their own responses to the pandemic. Overall, school psychologists experienced concerns and challenges with adhering to ethical codes and laws, particularly with confidentiality, throughout the Coronavirus-19 pandemic.

In addition to the variety of concerns related to their practice that the Coronavirus-19 pandemic introduced, there was also the psychological impact of the pandemic on the school

psychologist that they were required to navigate at this time. School psychologists may have gotten ill with the virus and likely had individuals they care about become ill as well. As this pandemic impacted nearly everyone in the United States, it was widely acknowledged that the Coronavirus-19 pandemic was a time of increased stress, and potentially, trauma. The increased psychological distress experienced as a result of the Coronavirus-19 pandemic affected students, educators, and school psychologists. School psychologists who experienced the illness, coronavirus, may have experienced symptoms affecting their stamina, energy, memory, vision, and/or executive functioning, thus, impairing their ability to do their best work (Centers for Disease Control and Prevention [CDC], n.d.-a, n.d.-b). In addition, psychologists may have experienced increased worry about ill family and friends, thus, limiting their attention and possibly impairing their work. In addition, school psychologists were expected to effectively work with students, teachers, and families who were also experiencing heightened psychological distress during this time and had increased needs for mental health support. All of these factors likely interacted to affect school psychologists' perceptions of their service delivery throughout the Coronavirus-19 pandemic.

National Association of School Psychologists Recommendations for the 2020-2021 School Year

The NASP released a variety of recommendations for returning to school during the Coronavirus-19 pandemic. These were sources of guidance for practitioners to help ensure best practices while providing online and in-person services throughout the Coronavirus-19 pandemic amid increased health risks, increased mental health and educational needs, and various lifestyle and work restrictions. These recommendations were designed to help school psychologists best provide services in a variety of areas including assessment and intervention. The NASP

recommended that schools and mental health and crisis teams revisit crisis and their mental health team structure, determine crisis response protocols and response evaluation procedures, and intentionally develop response plans for teacher and student deaths (NASP, n.d.-b). The National Association of School Psychologists (NASP) also had a variety of recommendations for evaluations and assessment throughout the pandemic.

The National Association of School Psychologists (NASP) provided recommendations related to assessment when providing online services. The organization stated that assessments should be administered in their standardized and validated format to ensure the most accurate results (NASP, n.d.-a). This was challenging during distance education as many direct assessments require in-person administration or assistance for some subtests (e.g., Block Design on the WISC-V). This would have impacted the school psychologists' ability to complete special education evaluations unless they had access to virtual alternatives.

One component of special education evaluations is determining whether or not the academic skill deficits are due to a lack of appropriate instruction. Once schools initially closed and then transitioned to online learning, this determination may have been more difficult to make. The National Association of School Psychologists hypothesized that because of the instructional changes and a potentially lengthened summer break, students would return to school significantly behind grade-level expectations. The organization argued for class-wide academic interventions to re-establish evidence-based instruction while allowing for response-to-intervention progress monitoring in order to address these deficits (NASP, 2020b). Evidence-based interventions and progress monitoring are both critical components of special education evaluations, particularly when considering Specific Learning Disability. The National Association of School Psychologists (2020c) highlighted that the desire to begin evaluation and

screening procedures (individual and universal) promptly upon returning to in-person learning would be present among educators. However, NASP (2020c) noted that it was critical to implement universal and class-wide academic and socio-emotional/behavioral interventions first, and then utilizing screenings and evaluations only after children have reoriented to the curriculum and academic/school expectations. Additionally, NASP (2020c) suggested beginning the school year with lower grade-level instruction. For example, while it may be common for 3rd grade teachers to review content taught near the end of second grade, they may have had to begin instruction with content from the middle of second grade upon returning to in-person learning. In addition to making recommendations for assessments throughout the Coronavirus-19 pandemic, NASP also provided some recommendations for intervention services.

Similar to their recommendations regarding assessments and screening procedures, NASP recommended immediately implementing socioemotional and behavioral interventions before beginning universal screening procedures. Their argument was that many of these students would respond to interventions or continue to adaptively adjust to their "new normal," thus, reducing the need for special education evaluations (NASP, 2020a). The NASP (2020d) highlighted the need for the adoption of new perspectives that argued that all students and staff experienced some form of trauma in response to the Coronavirus-19 pandemic. These NASP recommendations indicated the need to implement interventions and utilize progress monitoring with students prior to determining special education eligibility for both academic and socioemotional concerns. This would help to avoid the overidentification and misidentification of students with and without disabilities. The recommendations made by NASP (2020c) for schools reopening to in-person learning emphasize the need to adopt universal interventions that include progress monitoring and evidence-based instruction, as well as incorporate a trauma-

inclusive lens. It is important to investigate how schools incorporated these recommendations into their systems throughout the Coronavirus-19 pandemic due to the potential for over- and misidentification, as well as for knowledge in future crises.

Research on School Psychological Services During the Coronavirus-19 Pandemic

Assessment

Psychodiagnostic and psychoeducational assessments have traditionally been conducted in-person and psychologists argue many benefits of psychological testing related to in-person administration (Farmer, McGill, Dombrowski, Benson, et al., 2020, NASP, 2020c). For example, many psychodiagnostic assessment record forms include spaces for behavioral observations in their scoring protocols as a way to encourage behavioral observations in the assessment process (e.g., the Wechsler Individual Achievement Test, Fourth Edition [WIAT-IV], the Wechsler Intelligence Scale for Children, Fifth Edition [WISC-V], etc.). Behavioral observations are often included in psychological assessment reports, as psychologists attempt to draw logical connections between observed behaviors and test results.

Research in counseling has indicated the relationship between the client and clinician as being one of the most influential factors in therapy and psychologists have extended this importance to assessment (Farmer, McGill, Dombrowski, Benson, et al., 2020). Although rapport during testing does not appear to be empirically validated, clinicians and test developers alike have toted the importance of developing strong rapport with the client in order to ascertain the most accurate results (Farmer, McGill, Dombrowski, Benson, et al., 2020). It is likely that building rapport traditionally, or in person, is easier for many school psychologists to do compared to building rapport when video conferencing or speaking on the phone. This may be because the majority of their practitioner experience has been in-person. In building rapport, one

adjusts to the student's behaviors, attitude, and language in order, which may be more effective when in-person than virtual. In addition to building rapport in an attempt to attain the most accurate testing results, psychologists also follow specified testing procedures set forth by the designing company, which is referred to as standardized test administration.

Psychologists adhere to strict standardization procedures in the administration for a variety of the assessments they use, many of which advocate for a quiet, controlled testing space without distractions. Psychodiagnostic assessments are normed based on a standardized administration typically including a quiet, private space for the examiner and examinee to work (WIAT-III, 2009; WIAT-IV, 2020; WISC-V, 2014). If these assessments are completed virtually, the psychologist has limited control of the examinee's environment, leaving a high potential for distractions or an otherwise non-standardized testing environment, thus, limiting the validity of the results. In addition, technology issues may occur, such as someone's internet momentarily disconnecting or interruptions, which may completely invalidate the test results for that subtest. With virtual testing, the psychologist would not have the environmental control needed to eliminate distractions and other environmental variables that might impair testing performance. Furthermore, when distractions do occur, the psychologist may be able to limit the influence they have on the examinee, compared to an environment the psychologist controls. It is also critical that these disruptions or distractions are noted by the examiner, but they may go unnoticed if the test is administered virtually. Virtual test administration poses numerous challenges for psychologists, although many companies have developed options for virtual test administration of specific assessments.

Fully remote, virtual administration of assessments school psychologists use, disregarding checklists and questionnaires, are not available for numerous assessments. For

example, the Wechsler intelligence tests (WISC-V and WAIS-IV) are commonly used in educational assessment and each of these tests requires access to physical items that the examiner demonstrates with, and the examinee manipulates. Even the iPad versions of these assessments continue to use the physical items and have the examiner demonstrate the task with them, necessitating in-person administration. Some companies providing virtual evaluation services to school districts do administer these assessments and substitute or skip subtests with manipulatives (e.g., Block Design). As many of these assessments are not available for virtual administration, or were recently developed for virtual administration, research on virtual administration of these assessments is extremely limited and further research is needed in this area to better understand how virtual test administration affects the validity of the assessment.

School psychologists employed by school districts are unlikely to personally own testing kits, but rather use the testing kits their school district or educational cooperative has purchased. As a result, they are limited in their assessment choices according to what options their school district has. This helps provide some continuity in assessments within districts, and districts purchasing multiples of one kit may receive a discount on their purchase. However, school psychologists may not have access to assessments that are fully and easily accessible for remote administration due to the limited options available to them. Thus, school psychologists may not have had access to assessments that were feasible to administer virtually because they only had access to assessments owned by their school system or organization.

Minimal research exists to date on virtual psychodiagnostic assessment, although some research has been conducted with phone-based interviews and some diagnostic assessment. Interviews are considered a critical component of assessment. Research indicates that phone-based interviews acquire comparable information to in-person interviews for adults with anxiety

disorders, major depressive disorder, and substance use disorder (Rohde et al., 1997). Research with children and adolescents receiving diagnostic assessment services found that 96% of individuals received the same diagnosis from both the face-to-face and the videoconferencing interviews with the psychologist (Elford et al., 2000). While these findings provide some information about virtual psychodiagnostic assessment with some indications for reliability, much more research is needed in this area.

Intervention

Minimal, if any, research exists on online delivery of school psychology services in schools; however, the field of counseling has conducted more research in this area (G. H. Chan, 2020; Hu et al., 2020; Reay et al., 2020). Much of the counseling literature has focused on clinical populations, many with health disorders or living in rural areas. Providing counseling services in a non-traditional, or in-person format, has been achieved through phones and computers (Reay et al., 2020). While these technologies present several concerns for psychologists, such as environmental concerns related to confidentiality, they also provide increased flexibility for clinicians and clients and may allow for easier access to services for many individuals and families. Despite online counseling emerging in the 1970s, counselors still debate about whether online counseling services can provide commensurate benefits to in-person counseling (G. H. Chan, 2020). Furthermore, researchers argued that the Coronavirus-19 pandemic highlighted the need for increased online services to address significant mental health concerns, as in-person treatment was not always available during lockdowns and quarantines (Hu et al., 2020). Initial research indicated that counselors have largely relied on technology to maintain service delivery during the Coronavirus-19 pandemic around the world (Supriyanto et al., 2020). For example, counselors used videoconferencing technologies to “see” clients while

maintaining social distancing (Supriyanto et al., 2020). Some organizations have even documented their journey in service delivery throughout the pandemic.

Clinics and hospitals have published articles describing their transition from in-person mental health treatment to telehealth-based treatment in response to the Coronavirus-19 pandemic. While these were useful for gathering information about what technologies were used and what challenges came up during teletherapy, they did not provide information on efficacy of services during the Coronavirus-19 pandemic, likely because organizations were still adjusting to the pandemic, and it may have been too early to draw conclusions about the effectiveness of telehealth services during this time. However, a systematic review of 8 recent publications related to telehealth during the Coronavirus-19 pandemic concluded that telehealth was a viable option for mental health service delivery to providing services while minimizing in-person contact, although they did not provide any results of efficacy of telehealth treatment (Monaghesh & Hajizadeh, 2020). Other organizations have also documented their service delivery throughout the Coronavirus-19 pandemic. Research with parents of children with Autism Spectrum Disorder found that applied behavior analysts are able to provide consultation services via telehealth that allowed the parents to effectively provide functional communication training with their child (Wacker, Lee, Padilla Dalmau, Kopelman, Lindgren, Kuhle, Pelzel, Dyson, et al., 2012; Wacker, Lee, Padilla Dalmau, Kopelman, Lindgren, Kuhle, Pelzel, & Waldron, 2013). While initial findings on virtual counseling and consultation have indicated comparable effectiveness, research on how the Coronavirus-19 pandemic affected the effectiveness of therapeutic services needs to be further researched within the field of school psychology.

Some schools detailed and published their programs transition to virtual programming as a result of the Coronavirus-19 pandemic. An analysis of how a large university in the United

States transitioned their counseling services program in response to the Coronavirus-19 pandemic reported reductions in scheduled appointments and an increase in premature termination, which impacted roughly 30% of their clients. Perhaps surprisingly, they did not report any changes in attendance rates (Erekson et al., 2020). While students themselves are not able to "terminate" their IEP services, it might not be surprising to have seen a similar effect seen in the schools, where families appear to "terminate" and disconnect from the school, thus, eliminating their child's access to IEP services. Additionally, schools with specialized programs (e.g., Intensive Autism Classroom, Life/Functional Skills Classroom) may provide services that can only be provided in an in-person setting, such as potty training and functional living skills. These skills would have been challenging or impossible to work on via remote learning or may have required significant support from a family member or adult in the home. Research is needed to determine the impact school closures and remote learning had on student's access to their IEP services throughout the Coronavirus-19 pandemic. This will be important for addressing learning regression and in order to provide effective intervention at a level appropriate for the student(s).

Research on the efficacy of teletherapy counseling services has indicated promising results for the increased use of telehealth services in the future (Batastini et al., 2016; Osenbach et al., 2013). A meta-analysis with 14 studies on teletherapy services for depression found no significant difference in the effectiveness of telehealth services versus traditional, in-person services (Osenbach et al., 2013). Other meta-analyses have highlighted that both telehealth and in-person therapeutic services are very comparable. For example, research with counseling services for individuals in the criminal justice system or struggling with substance abuse, found slightly larger effect sizes for reduction in mental health symptomology and satisfaction with in-person counseling services compared to telehealth services (Batastini et al., 2016). However, this

study also found slightly larger effect sizes for engagement in the therapeutic process and positive perceptions of the therapeutic process among telehealth counseling services compared to in-person services (Batastini et al., 2016). These results indicated that telehealth is likely a viable alternative to in-person therapy for a variety of individuals experiencing many different concerns.

Research on telehealth service delivery has found varying results depending on the population studied. For example, a systematic review of randomized control trials, primarily with Internet Cognitive Behavioral Therapy (iCBT), found benefits of telehealth treatment for adults with depression and/or anxiety symptoms, but studies with children, adolescents, and mood disorders, Post-Traumatic Stress Disorder (PTSD) or Obsessive Compulsive Disorder (OCD), did not find significant benefits of participation (Arnberg et al., 2014). The effectiveness of telehealth counseling treatment is likely dependent on a variety of factors, including attendance, age, and cognitive functioning. A meta-analysis of studies of telehealth treatment for adults with depression found significant effects only when participants attended their phone-based sessions more than two times a month (J. J. Park et al., 2019). This is comparable to in-person psychotherapy effectiveness rates that indicate increased effectiveness with more frequent meetings (Erekson et al., 2015; Freedman et al., 1999). It is generally discouraged within the psychotherapy field to see therapy clients less than once every other week. Other meta-analyses have found that approximately 70-90% of participants complete their phone-based therapeutic treatment (Castro et al., 2020). These studies, however, have been completed with adults, who have more control over their attendance than children do, who are subject to the schedules of their parents and are strongly affected by their parents' values, which may or may not include education and mental health services (Castro et al., 2020; J. J. Park et al., 2019). Research with

children receiving virtual therapeutic services found similar rates of attrition for children participating in virtual and in-person psychotherapy, although there was a slightly higher rate of non-completion in the virtual group; with 16.4% of virtual patients and 12.1% of in-person patients failing to complete therapeutic treatment (Dadds et al., 2019). Additional research is needed in this area to better understand how consistently children attend teletherapy and their online education, as well as the effectiveness of these services for youth of different ages and capacities.

Behavioral interventions can be both reactive and proactive. Reactive behavioral interventions are immediate, where a school psychologist works with a child currently exhibiting behavioral problems to help them emotionally and behaviorally regulate. Alternatively, a school psychologist may have social skills group focused on behavior or social skills, or may provide consultation services with school personnel, to help reduce problem behaviors proactively. During school closures, could have been expected that school psychologists were not required to provide immediate behavioral intervention in the classroom. Due to remote learning, parents now had a much bigger role in their child's education. It is possible that school psychologists experienced an increase in requests for parent consultations as a result of parents' increased needs in supporting their child's education. For example, parents may have requested consultative support for concerns around their child's inattention and hyperactivity, which impacted their ability to engage with and attend to educational materials. This means that although school psychologists were not responding to immediate behavior concerns in the classroom during pandemic-related school closures, they may have received more questions than usual from parents regarding their children's behavior during remote learning. After schools returned to in-person learning, it is likely that school psychologists then experienced an increase

in calls for immediate behavior support in classrooms. This increase would likely be due to kindergarteners who did not participate in preschool due to the Coronavirus-19 pandemic and are unsure of their role in a classroom, and due to first and second graders with limited experience in school settings and following school expectations. Requests for support by school psychologists likely fluctuated throughout the Coronavirus-19 pandemic as schools transitioned from in-person to distance education and back again.

Increased Youth Needs During the Coronavirus-19 Pandemic

Mental Health Needs

Youth were most likely affected by the Coronavirus-19 pandemic differently than adults for a variety of reasons. School is typically where youth spend roughly a third of their day and their social lives often revolve around school, since that is where they meet many of their peers. Youth also have decreased control over their lives compared to adults and are at a different stage of cognitive development. Due to stay-at-home orders and online learning, the Coronavirus-19 pandemic effectively removed youth from their normal, social environment. A variety of research has indicated that the Coronavirus-19 pandemic resulted in increased mental health distress and symptomology among both youth and adults. Canadian youth, both in the community and outpatient clinic populations, compared their mental health during the Coronavirus-19 pandemic and 3 months prior (with April 2020 as the start of the Coronavirus-19 pandemic). These youth reported significant declines in their mental health and cited depression, anxiety, and suicidal ideation as their primary symptoms of concern (Hawke, Barbic, et al., 2020). In addition, these youth reported concerns related to family members' health, as well as interruptions to their academic and/or career plans as major stressors throughout the Coronavirus-19 pandemic (Hawke, Barbic, et al., 2020). Canadian youth and young adults with

physical health challenges reported significantly higher levels of internalizing symptoms than their peers without physical health concerns (Hawke, Monga et al., 2020). Similar research found very high rates of Canadian adolescents reaching the clinical threshold for depression (51.2%), anxiety (40%), and post-traumatic stress disorder (45%), with over 50% of adolescents reporting substance use (Craig et al., 2020). Comparably, in China, 40% of youth and young adults reported psychological problems (Liang et al., 2020), and in Italy, youth with neuropsychiatric disorders reported increases in post-traumatic stress and obsessive-compulsive symptoms during the Coronavirus-19 pandemic (Conti et al., 2020). Throughout the pandemic, post-traumatic stress symptoms were higher in adolescents with a history of ACEs, or Adverse Childhood Experiences, and among adolescents who are aware of exposure to the virus (J. Guo et al., 2020). Additional research indicates an increase in symptoms of anxiety and depression among youth during the Coronavirus-19 pandemic.

In the United States, caregivers of children and adolescents have reported clinical levels of anxiety and depression symptoms for both themselves, the caregivers, and their children, with higher rates and severity of symptoms reported from individuals living in areas with less pandemic restrictions (Fitzpatrick et al., 2020). Adolescents in particular experienced increased depressive and anxious symptoms (Nearchou et al., 2020) and over 60% of youth reported experiencing at least moderate worry about contracting the virus (Xie et al., 2020). Fear of contracting the virus predicted anxiety and depression symptoms in adolescents (Seçer & Ulaş, 2020). School psychologists' mental health caseload was likely affected throughout the Coronavirus-19 pandemic as schools closed, had remote learning, and re-opened. Some students may have been more engaged with in-person therapeutic services while the opposite may have held true for other students. In addition to their mental health caseload, the Coronavirus-19

pandemic had definite impacts on their intervention and consultation caseloads, thus, the amount of time spent of different activities likely fluctuated throughout the Coronavirus-19 pandemic as school settings changed from remote, to in person learning, possibly multiple times. Despite the many psychological concerns remote learning caused, students continued to report interest in learning throughout the Coronavirus-19 pandemic (Mirahmadizadeh et al., 2020; Mulyani et al., 2021) and a desire to spend more time with their teachers (Mulyani et al., 2021; Nabor, 2021). This research highlights the increases in mental health challenges among students throughout the Coronavirus-19 pandemic and the importance of the school environment in their lives. This increase potentially led to an increase in referrals for mental health services in schools. Despite these challenges, many students continued to demonstrate a desire to learn and connect with their teachers, indicating they felt some aspects of school were beneficial to them.

Behavioral Needs

In addition to heightened mental health concerns during the Coronavirus-19 pandemic, increased behavioral concerns were also reported. Researchers documented increased behavioral challenges, particularly among children with externalizing disorders, such as attention-deficit/hyperactivity disorder (ADHD) or oppositional defiant disorder (ODD) throughout the Coronavirus-19 pandemic (Henderson et al., 2020). It is likely these increases were related to reduced access to students' school-based and/or external intervention services, such as counseling or token economies (Henderson et al., 2020; Neece et al., 2020). Comparisons between survey results pre- and during the pandemic indicated that youth and young adults with Autism showed increases in aggression and behavioral problems during the pandemic (Colizzi et al., 2020; Mutluer et al., 2020).

Beyond psychological and behavioral symptoms related to the pandemic, youth were at increased risk of experiencing family violence because of the increased stress in daily family lives during the Coronavirus-19 pandemic (Brown et al., 2020; Pereda & Díaz-Faes, 2020). Parents had increased child rearing responsibilities during the pandemic because children were spending more time at home and parents likely had to facilitate their child's education much more than normal (Brown et al., 2020; Pereda & Díaz-Faes, 2020). This may have been compounded by stressors related to finances, job security, and health that parents were also experiencing during these times (Brown et al., 2020; Pereda & Díaz-Faes, 2020). Due to the increased time together, heightened educational responsibilities, mental health concerns, and stressors, it is very likely that there was an increase in family conflict during online learning. This increase in risk was compounded by a decreased ability to hide abuse from educators and other mandated reporters. Educators are responsible for roughly 20% of all mandated reports for suspected child abuse or neglect (Child Welfare Information Gateway Children's Bureau, 2021). The detrimental psychological effects of trauma and abuse are widely documented (Fernandes & Osório, 2015; Heim et al., 2008), and youth may have experienced increased psychological distress due to increases in familial abuse during the Coronavirus-19 pandemic (Brown et al., 2020; Pereda & Díaz-Faes, 2020). In addition, students with minority identities that are not accepted by their family members may not have been safe sheltering at home and were at a higher risk of physical and sexual abuse (Cohen & Bosk, 2020) during the Coronavirus-19 pandemic. Overall, there was likely an amplified risk of family experiencing family conflict and violence during the pandemic due to increased stress during this time experienced by both children and adults.

Increased Adult Needs During the Coronavirus-19 Pandemic

The COVID-19 virus infected millions worldwide and necessitated various forms of stay-at-home orders and mask mandates across the United States. For many, the cogency of the Coronavirus-19 pandemic was unexpected. Individuals had to quickly adjust to changes in work and their social lives while navigating increased health risks, ill friends and family, and maintaining normal aspects of their lives, such as getting groceries, paying rent/mortgage, etc. Due to the many changes in peoples' lives, individuals around the world experienced increased mental health symptoms during this time (Casagrande et al., 2020; Daly et al., 2022; McGinty et al., 2020). Research with adults from the UK during April and May of 2020 indicated significantly higher levels of reported anxiety and mental health problems at this time compared to previous years (Daly et al., 2022). Similarly, in the United States, adults reported significantly higher levels of loneliness and psychological distress in April 2020 (McGinty et al., 2020) and at the end of June than prior to the pandemic (Czeisler et al., 2020). In Italy, individuals reported increases in sleep disorders and post-traumatic stress symptoms as a reaction to the Coronavirus-19 pandemic (Casagrande et al., 2020), and in Argentina adults who were quarantined reported rises in anxiety, depression, hostility, distress, and obsessive-compulsive symptoms (Fernandez et al., 2020). Other research on psychological distress in adults in the United States (n = 7,319) found amplified distress in the first two weeks of April with a decrease in levels of distress in May and June. Stress levels then remained stable through July when the study terminated (Daly & Robinson, 2021). Interestingly, individuals who identified as "other race/ethnicity" (choices of White, Hispanic, Black, and Other) reported significant increases in distress from March to July 2020 (Daly & Robinson, 2021). Patterns in distress did not significantly differ between individuals with and without mental health diagnoses (Daly & Robinson, 2021). Research with

adults in the United States at the end of June 2020 indicated that young adults, essential workers, and racial/ethnic minorities experienced more mental health symptomology and increased substance use at this time compared to other groups (Czeisler et al., 2020). This research indicated a global increase in mental health needs during the Coronavirus-19 pandemic, with the apex of needs hit in April and May of 2020. As school psychologists worked with teachers, administration, and families, it is likely that the increased distress experienced by adults led to increased demands on the school psychologist. For example, teachers who experienced lower levels of compassion fatigue and higher levels of distress may have been more likely to refer students for special education evaluations. Increased mental health needs were reported throughout the Coronavirus-19 pandemic by both youth and adults. Increased symptomology, health risks, and the plethora of lifestyle changes that accompanied the Coronavirus-19 pandemic, individuals globally were tasked with the challenge of adapting to a new kind of temporary life.

Psychological Adaptation

Psychological adaptation refers to one's ability to cognitively, behaviorally, and/or emotionally change and adjust in response to external changes, where these changes provide some benefit to the individual (Bjorklund, 2015). Psychological adaptation is often investigated in relation to a life-changing event, such as a natural disaster or seeking refuge in another country (Pérez-Fuentes et al., 2020). Individuals who struggle to adapt to changes exhibit more internalizing and externalizing symptoms such as anxiety, depression, and behavioral challenges (Cropp et al., 2019) and may exhibit maladaptive coping. Maladaptive coping refers to coping behaviors that result in psychological distress at some point in their future (Lazarus & Folkman, 1984). One's ability to successfully adapt is related to well-being, or one's overall feelings of

happiness and satisfaction and difficulties in life can affect well-being (Kettlewell et al., 2020). A hedonic adaptation model argues that individual well-being tends to stay at a stable level, with adaptation helping us return to our normal level of well-being (Graham & Oswald, 2010). As there were increased health risks, rapid lifestyle changes, and increase mental health needs during the Coronavirus-19 pandemic, it is likely that overall well-being decreased during this time. Combined with the increased demands placed on school psychologists during this time (e.g., increased student mental health concerns, increased parent and teacher needs for consultation, transitioning to online service delivery), it is likely that both well-being and adaptability decreased for school psychologists during the Coronavirus-19 pandemic.

One's ability to psychologically adapt is related to many factors. Research on adaptability specific to the Coronavirus-19 pandemic found empirical support via questionnaire factor analysis for anxiety, depression, tolerance to uncertainty, awareness, coping, and emotion management (Pérez-Fuentes et al., 2020) as being factors that may affect one's adaptability. Locus of control refers to how much control one believes they have over their life and the events occurring in it. Locus of control is described in relation to internal or external factors that have control over one's life (Galvin et al., 2018). Individuals with a stronger internal locus of control tend to make more adaptive decisions when confronting change (Cano-García et al., 2007; Yu et al., 2019). Tolerance to uncertainty refers to how individuals comprehend, process, and respond to information presented in uncertain situations (Freeston et al., 1994). As uncertain situations may increase anxiety, stress, and/or worry (Cori et al., 2020; Mazza et al., 2020; Soriano et al., 2019), these emotions may impact one's ability to successfully adapt (Fu et al., 2018). In addition to emotional and personality factors, there are many other factors that are related to one's psychological adaptability, particularly throughout the Coronavirus-19 pandemic.

Research on individuals' adaptation to the Coronavirus-19 pandemic has indicated that women and younger adults were more likely to experience negative effects related to the Coronavirus-19 pandemic (e.g., anxiety, worry, etc.) compared to men and older adults (Morales-Vives et al., 2020). Living with significant others or family members (Morales-Vives et al., 2020) and practicing mindfulness (Conversano et al., 2020) during the lockdowns appeared to help mitigate the psychological effects of mandated stay-at-home orders or lockdowns. Individuals who exhibited greater levels of adaptability to the Coronavirus-19 pandemic also used routines to structure their time in lockdown and humor to help buffer the stress and worry related to the Coronavirus-19 pandemic (Morales-Vives et al., 2020). They also trusted in science and healthcare systems (Morales-Vives et al., 2020). Children and adolescents benefited from acceptance of the current situation, use of humor, participation in socially distant social activities, by emphasizing the benefits of remaining at home (Orgilés et al., 2021), and by following a schedule of structured activities (Pigaiani et al., 2020). Due to the relationships between adaptability, the Coronavirus-19 pandemic, and mental health, it is likely that school psychologists with greater adaptability to the pandemic experienced greater feelings of self-efficacy in their work throughout the Coronavirus-19 pandemic. Conversely, school psychologists with lower adaptability to the Coronavirus-19 pandemic possibly experienced lower feelings of self-efficacy in their work. Mental health symptomology may have affected one's ability to adapt and their self-efficacy throughout the pandemic as well.

Crisis Self-Efficacy

Self-efficacy refers to one's perception of whether or not they have the skills to complete a task (Bandura, 1977). School psychologists have a variety of roles and responsibilities and have self-efficacy regarding each of these behaviors. For example, Response to Intervention

(RtI) is a model many states have adopted as part of their special education identification and evaluation framework (Burdette & Etemad, 2009). While most school psychologists feel prepared to implement Response to Intervention (RtI) in their schools, those who have experience within an RtI system reported higher feelings of confidence, or self-efficacy, in their RtI skillset (Aspiranti et al., 2019). School psychologists' self-efficacy for providing services throughout the Coronavirus-19 pandemic was likely an important component of how they perceive their service delivery.

Relationships between mental health symptoms, such as anxiety and depression, and self-efficacy have been studied for decades. Bandura (1988) theorized that feelings of self-efficacy were negatively correlated with mental health conditions. Among individuals with type 2 diabetes, anxiety and depression are both negatively correlated with feelings of self-efficacy related to self-care behaviors (Wu et al., 2013). Research in counseling psychology has found a relationship between depression and feelings of efficacy. Among nursing students, those who experienced reductions in depression also experienced slight increases in self-efficacy (Y. F. Guo et al., 2017). This negative correlation between mental health and self-efficacy was also present in adolescents struggling with depression and other mental health challenges (Ehrenberg et al., 1991). Medical patients showed a similar inverse relationship between feelings of depression and self-efficacy, including among those with knee injuries (Pazare et al., 2015), chronic heart failure (Tsay & Chao, 2002), and type 2 diabetes (Wu et al., 2013). This relationship between self-efficacy and depression has been found among new mothers who were breastfeeding (Zubaran & Foresti, 2013), and among aging populations (Holahan & Holahan, 1987). This research demonstrated a negative correlation between mental health and feelings of efficacy. During the Coronavirus-19 pandemic when the global population was experiencing more mental health

challenges, it is likely that school psychologists' mental health and possibly their self-efficacy is negatively affected. Overall, research has shown that emotional difficulties are related to decreased feelings of self-efficacy, thus, school psychologists who experienced more emotional difficulties throughout the Coronavirus-19 pandemic may have been more likely to be concurrently experiencing decreased self-efficacy for service provision.

Self-efficacy is also applicable when reacting to a crisis situation, such as the Coronavirus-19 pandemic. School psychologists and behavior interventionists are likely to use applied behavior analysis principles when responding to immediate behavior crises or concerns, such as intervening with a student repeatedly hitting themselves against a hard surface, and using techniques such as reinforcement and modeling (NASP, 2021). Regarding self-efficacy and the use of applied behavior analysis (or ABA) in schools, the amount of training completed by a practitioner predicted their use of ABA, which was mediated by their feelings of self-efficacy (Runyon et al., 2017). This means that practitioners with more training often felt higher feelings of self-efficacy and were then more likely to use ABA skills and techniques. Suicide postvention is another aspect of crisis response that school psychologists may have a role in, as suicide is one of the three main causes of death for adolescents (Centers for Disease Control and Prevention, 2023). Unfortunately, over half of school psychologists have reported having very limited confidence and knowledge about suicide postvention, with even less knowledge on preventing suicide contagion (O'Neill et al., 2020). As seen with other self-efficacy and crisis response, training and experience predicted feelings of self-efficacy in suicide postvention (O'Neill et al., 2020). It is important to note that the majority of studies discussed thus far were significantly limited in their population, particularly geographically, thus, research with large, national

populations is needed to strengthen research in this area. Furthermore, research on crisis self-efficacy for more infrequent crises (such as death of a teacher and pandemics) is also needed.

Crisis self-efficacy has not been widely researched among school psychologists specifically to date, thus, research on crisis self-efficacy conducted with other relevant school personnel, such as administration and counselors, was reviewed. Schools are expected to be prepared to respond to a variety of crises, however, not all school staff feel equally prepared or trained to respond to crises (McCarty, 2012). School counselors help intervene with crises in the schools and have reported that abuse, suicide, grief and/or death, and aggression and/or violence were the most frequently occurring crises during their practicum and/or internship experiences (Allen et al., 2002). Experiences with crisis preparation are increasing among school counselor graduate students, with reports of preparation during a practicum/internship experience increasing from 37.3% prior to 1995 to nearly 70% in the early 2000s (Allen et al., 2002). However, only 18% of these school counselors reported feeling well prepared for crisis intervention (Allen et al., 2002). Research with teachers, administration, and other school staff found, that although participants were likely to indicate that they felt adequately prepared for crises, their actual knowledge of best practice in crisis response and their amount of experience in crisis response activities was lacking. Furthermore, less than 65% of participants had read their school's safety plan, further indicating a lack of preparedness for crises among educators (Olinger Steeves et al., 2017). It is important to note that this study used a limited number of more frequently occurring types of crises (e.g., suicide, bombing threat, campus intruder, and natural disaster) and estimates of preparation may be significantly lower for less frequently occurring crises, such as health pandemics. In general, reading the crisis plan was cited as a critical component to feeling adequately prepared for responding to crises in the schools for

(Alba & Gable, 2011; Olinger Steeves et al., 2017). As worldwide health pandemics are rare, it is possible that many districts did not have set crisis plans determined for health pandemics and districts experienced a plethora of challenges throughout the Coronavirus-19 pandemic.

Research on school preparedness to effectively respond to various crises has raised concerns about schools' ability to respond to, and maintain learning throughout, the Coronavirus-19 pandemic. For example, researchers have stated that a lack of physical materials (e.g., textbooks) and a lack of knowledge and guidance for parents would significantly restrict student learning during pandemic-necessitated online learning (Chabbott & Sinclair, 2020). Researchers also stated that personnel shortages would likely occur throughout the Coronavirus-19 pandemic, as teachers and staff, or those that live with them, got sick with or were exposed to the COVID-19 virus (Bailey & Schurz, 2020). Illnesses resulted in absences and even temporary "closures" of schools or specific classrooms/grades (Rothstein & Olympia, 2020). The fluctuating nature of education during the Coronavirus-19 pandemic likely affected educator's feelings of preparedness to deliver educational services during this time.

Crisis self-efficacy was also important for responding to the Coronavirus-19 pandemic and was affected by a variety of factors. Because an international pandemic has not affected the United States during current lifetimes, the research to guide hypotheses about potential levels of crisis self-efficacy during the Coronavirus-19 pandemic is extremely limited. Some research on school personnel's self-efficacy in appropriately responding to the Coronavirus-19 pandemic changes and supporting their students during this time has been conducted, although the research in this area is minimal. Research with public school educators has indicated that throughout the pandemic, those with feelings of high self-efficacy, as defined by more feelings of control over their stressors than those with low self-efficacy, also had higher levels of commitment to their

schools, students, and teaching (Baloran & Hernan, 2020). In addition, educators who experienced compassion fatigue appeared to have lower levels of online teaching self-efficacy during the Coronavirus-19 pandemic and were more likely to have been working in education longer than those with less compassion fatigue and higher levels of online teaching self-efficacy (Yang, 2021). Significantly more research is needed in this area to better understand how educators' feelings of crisis self-efficacy and their mental health affected their performance throughout the Coronavirus-19 pandemic.

Summary

Due to the Coronavirus-19 pandemic that had 90% of the United States on stay-at-home orders at some point between March and May 2020, many school psychologists had to rapidly transition from face-to-face service delivery to media-based service delivery (videoconferencing, phone, etc.) in order to maintain the students' IEP services. As training in online service delivery was limited for school psychologists prior to the Coronavirus-19 pandemic, many concerns related to online service delivery needed to be addressed. Some of these concerns related to confidentiality, student attendance and access, and the effectiveness of virtual school psychology services. Furthermore, some school psychological services, particularly related to assessment, are not able to be completed via videoconferencing or phone calls. In addition to a lack of training in online service delivery, there was also a lack of research to guide practitioners and educators in their practice during this challenging time, as well as a lack of research on how practitioners and educators are performing and feeling about their service delivery during the Coronavirus-19 pandemic. This investigation will contribute to the scarcity of literature detailing school psychologists' perceptions of their service delivery throughout the Coronavirus-19 pandemic and the potential affects their feelings of crisis self-efficacy related to the Coronavirus-19 pandemic

have on these perceptions. Of particular interest are how school psychological services in public schools have changed in response to the Coronavirus-19 pandemic, school psychologists' perceptions of their service effectiveness, and how those perceptions may be related to school psychologists' current mental health symptomology (e.g., symptoms of depression, anxiety, somatic symptoms, etc.), as well as their perceptions of their service delivery. This research will aid in our understanding of school psychology practitioner functioning during crisis, and in the unusual case of a multi-year worldwide health pandemic.

CHAPTER III

METHODOLOGY

The purpose of the present study is to investigate how school psychological services in public United States primary and secondary schools changed and adapted in response to the Coronavirus-19 pandemic. In order to evaluate and better understand the changes in school psychology service delivery throughout the Coronavirus-19 pandemic, a variety of surveys were administered to school psychology practitioners. Specifically, the Patient Health Questionnaire-4, the Crisis Self-Efficacy Index, and a survey developed for this study focusing on school psychological services throughout the Coronavirus-19 pandemic, entitled the School Psychology Services During the Coronavirus-19 Pandemic Survey, were used. Of particular interest were symptomology experienced by the school psychologist during this time, amount of time spent of services before and during the Coronavirus-19 pandemic, changes in student mental health and academic needs, and school psychologist perception of their services online versus in person. Symptomology in the areas of anxiety, depression, somatic, and social dysfunction were used to assess this area. In addition, services delivered during three specific time periods were compared; the 2019-2020 academic year prior to March 2020, March 2020-May/June 2020, and the 2020/2021 schoolyear.

Research Questions and Hypotheses

Q1 How has the amount of time school psychologists spent on intervention, assessment, and consultation services changed in response to transitioning online?

H1 The amount of time school psychologists spent working on assessment increased in the 2020-2021 school year.

H2 The amount of time school psychologists spent working on intervention increased in the 2020-2021 school year.

H3 The amount of time school psychologists spent on assessment services reduced when schools first transitioned online in response to the Coronavirus-19 pandemic.

H4 The amount of time school psychologists spent on intervention services reduced when schools first transitioned online in response to the Coronavirus-19 pandemic.

H5 The amount of time school psychologists spent on consultation/collaboration services reduced when schools first transitioned online in response to the Coronavirus-19 pandemic.

Q2 How is school psychologists' adaptation to the Coronavirus-19 pandemic and current symptomology related to their perceptions of their service delivery?

H6 School psychologists' crisis self-efficacy for the Coronavirus-19 pandemic mediates the relationship between their reported mental health symptomology and their beliefs about the effectiveness of their services online versus in person.

Participants

This research was approved by the Institutional Review Board at the University of Northern Colorado under the Exempt/Expedited category prior to any actual participant recruitment or data collection (see Appendix A). In consideration of the Coronavirus-19 pandemic, this study was designed to eliminate in-person meetings, thus, all data were collected via Qualtrics. Participant recruitment and survey completion was entirely online. All surveys completed by participants required consent clicking "Yes" or "No" to indicate consent and included a document about risks, benefits, etc.

Recruitment

To participate in this study, individuals were required to have been a practicing school psychologist in a school during the 2019-2020 and 2020-2021 academic years. This includes

individuals functioning as an intern, but excludes individuals such as school psychology trainers, school psychologists working in private practice, hospitals, and other settings, and school psychologists working at the district level or functioning strictly as a counselor, behavior interventionist, or other related positions in a school. Participant selection was designed to include as many school psychology practitioners as possible, given they had been a practicing school psychologist, as an intern or licensed practitioner, since the 2019-2020 school year.

School psychologists were recruited through school psychology state organizations and an online school psychology forum on Facebook, Said No School Psychologist Ever (SNSPE); however, membership to these organizations was not required for participation. An email was sent out through the listservs for these organizations with a request for participation and a slightly modified version of the email was posted on the Said No School Psychologist Ever (SNSPE) page. The email explained the general purpose of the research and asked organizations to forward the email on their listserv. The email contained a link to a Qualtrics survey with an introduction, IRB information, and consent procedures. After the participants consented to participate in the study, they were directed to a demographics section. Then, participants were asked about their school(s), how they provided their school psychological services, time spent in service delivery, and their crisis self-efficacy. All questions required an answer in order to submit the survey, thus missing data were minimal for this study. Participants who failed to complete the survey were not included in the analyses, as many ceased participation after the demographics section. Participants were allowed to select “I Prefer Not To Answer” option for some demographic items and these responses were coded as such. If a survey was missing data, it was likely that the survey was not completed by the participants and thus was excluded from analyses.

Sample Size Estimation

G Power analyses were conducted for both an ANOVA and a 2-sample *t* test using G*Power 3.9.1.2. With a large effect size, the analyses indicated the need for approximately at least 159 participants. A large effect size was chosen in order to be conservative with the sample size. Research in counseling and clinical psychology indicated averages of 50% response rates (Van Horn et al., 2009). Other research has indicated response rates as low at 21% (Sheehan, 2001). Assuming a lower response rate, this survey needed to be sent out to approximately 800 people.

Attrition

There were individuals who did not complete the surveys. In cases where surveys were incomplete, the results of that individual's survey(s) were not included in analyses.

Missing Data

A setting in Qualtrics was selected that required responses to all questions in order for participants to submit the survey, thus missing data were minimal. Participants were able to select "I Prefer Not to Answer" option for some demographic items and these responses were coded as such.

Measures

Internal consistency measures help analyze the variability, or inconsistency, across all of the test items and is calculated based on the number of items and the correlations between items (Urbina et al., 2014). Using SPSS, an internal consistency reliability analysis using Cronbach's alpha (Cronbach, 1951) was used to analyze the internal consistency of the survey. Cronbach's alpha is a frequently used analysis in determining a survey's internal consistency and only requires a single administration to a single group (Urbina et al., 2014). Furthermore, Cronbach's

alpha is commonly used with surveys where questions have multiple response options, such as a Likert-scale (Urbina et al., 2014). As this test will not be administered a second time for this investigation, test-retest reliability was not calculated.

Personal Health Questionnaire-4

The Personal Health Questionnaire-4 (PHQ-4) is a 4-item measure of anxiety and depression symptoms. Anxiety and depression are measured with two questions each, with the mood/depression scale labelled the Patient Health Questionnaire-2 (PHQ-2) and the anxiety scale labelled the General Anxiety Disorder 2-item (GAD-2). A variety of studies have demonstrated adequate internal consistency for both subscales and the overall measure (Kroenke et al., 2007; Löwe, Kroenke, & Gräfe, 2005; Löwe, Wahl, et al., 2010). The PHQ-4 has been found to be valid with both clinical and general populations (Kroenke et al., 2007; Löwe, Kroenke, & Gräfe, 2005; Löwe, Wahl, et al., 2010). The PHQ-2 has been found to be negatively correlated with other self-report scales, such as the Questionnaire on Life Satisfaction and the Resilience Scale, which would be expected and contributes to an argument of validity (Löwe, Wahl, et al., 2010). Furthermore, both the GAD-2 and the PHQ-2 were associated with various risk factors for anxiety and depression, such as income and employment status (Löwe, Wahl, et al., 2010). For this research investigation, the overall internal consistency reliability was good at 0.83. For the anxiety subscale (GAD-2), the internal consistency was 0.78 and for the depression subscale (PHQ-2), the internal consistency was slightly higher at 0.83, both of which are acceptable according to the literature (Bland & Altman, 1997) and are comparable to past research with the PHQ-4. A copy of the items included in this questionnaire are in Appendix B.

Crisis Self-Efficacy Index

In order to measure crisis self-efficacy related to the Coronavirus-19 pandemic, or how well an individual feels prepared and able to successfully continue functioning throughout the pandemic, a recently developed scale titled the Crisis Self-Efficacy Index was used (S. Park & Avery, 2019). Written permission to use this survey was obtained by the principal investigator from the original author of the survey. The Crisis Self-Efficacy Index is a 14-item survey with Likert-scale questions. The overall internal consistency reliability of the scale in initial validity testing was .96 with the individual factors ranging from .83 to .96, all of which are generally considered to be acceptable (Gliem & Gliem, 2003). There are 4 individual factors that comprise this survey, as found during exploratory factor analysis: action, prevention, achievement, and management of uncertainty that consist of 3 items each. S. Park and Avery (2019) reported the following alpha levels for internal consistency estimates of the factors; Action (0.96), Prevention (0.83), Achievement (0.96), and Management of Uncertainty (0.93). For this research investigation, the overall internal consistency index for the Crisis Self-Efficacy Index was 0.942, which is considered to be strong (Bland & Altman, 1997). Analyses from this investigation found the following alpha levels for internal consistency estimated of the factors; Action (0.83), Prevention (0.86), Achievement (0.89), and Management of Uncertainty (0.85), all of which are considered acceptable (Bland & Altman, 1997). A copy of the items used in this questionnaire are included in Appendix C.

School Psychology Services During the Coronavirus-19 Pandemic Survey

In order to evaluate how school psychological services have changed throughout 2020, the principal investigator developed a survey that includes demographic items and questions about school psychological service delivery. The specific time periods being compared were; the

2019-2020 academic year prior to March 2020, March 2020-May/June 2020, and the 2021/2022 school year. The principal investigator followed Urbina et al.'s (2014) recommendations for test item development. In addition, recommendations for retrospective research with individuals throughout the Coronavirus-19 pandemic were taken into consideration. Specifically, this research indicated that aggregate retrospective data with individuals throughout the Coronavirus-19 pandemic can be consistent and reliable (Hipp et al., 2020). These authors also recommended to minimize the cognitive loading on the retrospective questions, minimize the number of retrospective questions, asking broad, easy to understand questions, and using anchor points to bring focus to a specific behavior or concern across time (Hipp et al., 2020).

This survey was developed using the NASP practice model to focus on specific content areas. Second, the survey items have been examined by both school psychologists and school psychology trainers for its specificity and relevance to the research questions, as well as any potential faults in the wording. Based on these reviews, some items with edited for clarity and verbiage. Next, the survey was sent to 3 graduate students in school psychology for further evaluation and additional edits were made. A copy of this survey is included in Appendix D. The overall internal consistency index for the School Psychology Services During the Coronavirus-19 pandemic Survey was 0.23 while the internal consistency index for the questions that had participants estimate the percentage of time spent in service areas throughout the Coronavirus-19 pandemic was 0.221. The internal consistency index for the 8 questions assessing perceptions of service delivery effectiveness online versus in person was 0.672. These are generally considered to be unacceptable (Bland & Altman, 1997).

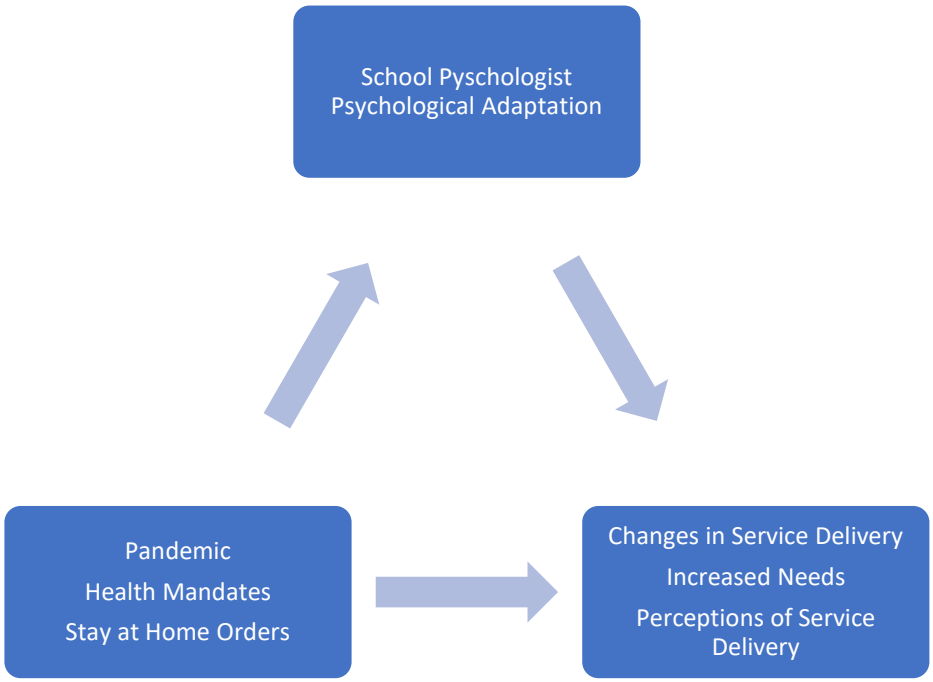
Research Design

For this study, a quantitative research design utilizing 3 surveys was implemented to identify whether a relationship between school psychologists' current symptomology (e.g., levels of depression, anxiety, etc. and their perceptions of their services during the Coronavirus-19 pandemic exists. In addition, the amount of time school psychologists spent on different services was be compared to see if there is a significant difference between the amount of time spent on consultation and collaboration, intervention, and assessment services prior to March 2020, March 2020-May/June 2020, and during the 2021-2022 schoolyear. This research study was determined to be exempt by the University of Northern Colorado Institutional Review Board (see Appendix A). Participants completed the survey through Qualtrics, and then data were then converted into an excel sheet. Data from this research investigation were analyzed using R Package 4.4.0.

In this investigation, the Coronavirus-19 pandemic and related changes such as stay-at-home orders, mask mandates, etc. were considered to be independent variables while time spent on service delivery and perceptions of service delivery were dependent variables. In addition, the principal investigator hypothesized that there is a relationship between school psychologists' adaptability to the Coronavirus-19 pandemic, as measured by the PHQ-4 and their current symptomology, and their perceptions of their service delivery. A model of these hypothesized relationships is presented in Figure 2.

Figure 2

The Coronavirus-19 Pandemic, Adaptation, and Consequences Model



Data Analysis

In addition to basic descriptive statistics on demographic variables (age, gender, NASP accreditation, type of school, etc.) and Likert scale questions, as well as the analysis for internal consistency, the following statistical tests was conducted for each research question and hypothesis:

Q1 How has the amount of time school psychologists spend on counseling, assessment, and consultation services changed in response to transitioning online?

Repeated measured ANOVAS were run for each service area (i.e., consultation and collaboration, assessment, and intervention) and compared all 3 time points simultaneously. Assumptions for repeated measure ANOVAS include a continuous dependent variable, related groups, no outliers, normally distributed dependent variable, and sphericity. For the present

investigation, the dependent variable of the percentage of time spent in different service areas is continuous and the same participants completed the questions for each time point, so the groups are related. Data distribution and sphericity are discussed in the following chapter.

Q2 How is school psychologists' adaption to the Coronavirus-19 pandemic-related changes and stressors and current symptomology related to their perceptions of their service delivery?

Structural equation modeling (SEM) was used to look at the relationships between crisis self-efficacy, mental health symptoms, and perceptions of service delivery effectiveness. Test assumptions for structural equation modeling include normality, no missing data, measurement and sampling errors, and model fit. This research investigation utilized maximum likelihood estimation techniques which assume normality. There were no missing values in this dataset. The assumptions of measurement and sampling errors were assumed to be met due to all participants completing the same survey. The model fit indices are discussed in Chapter IV.

CHAPTER IV

RESULTS

Introduction

This research investigated the perceived impact of the Coronavirus-19 pandemic on school psychological services during the 2019-2020 and 2020-2021 school years. Of particular interest was how the amount of time spent in consultation and collaboration, assessment, and intervention services changed throughout the Coronavirus-19 pandemic. In addition, the relationships between school psychologists' crisis-self efficacy, perceptions of their service delivery throughout the Coronavirus-19 pandemic, and mental health symptoms at the time of survey completion were analyzed.

Demographics

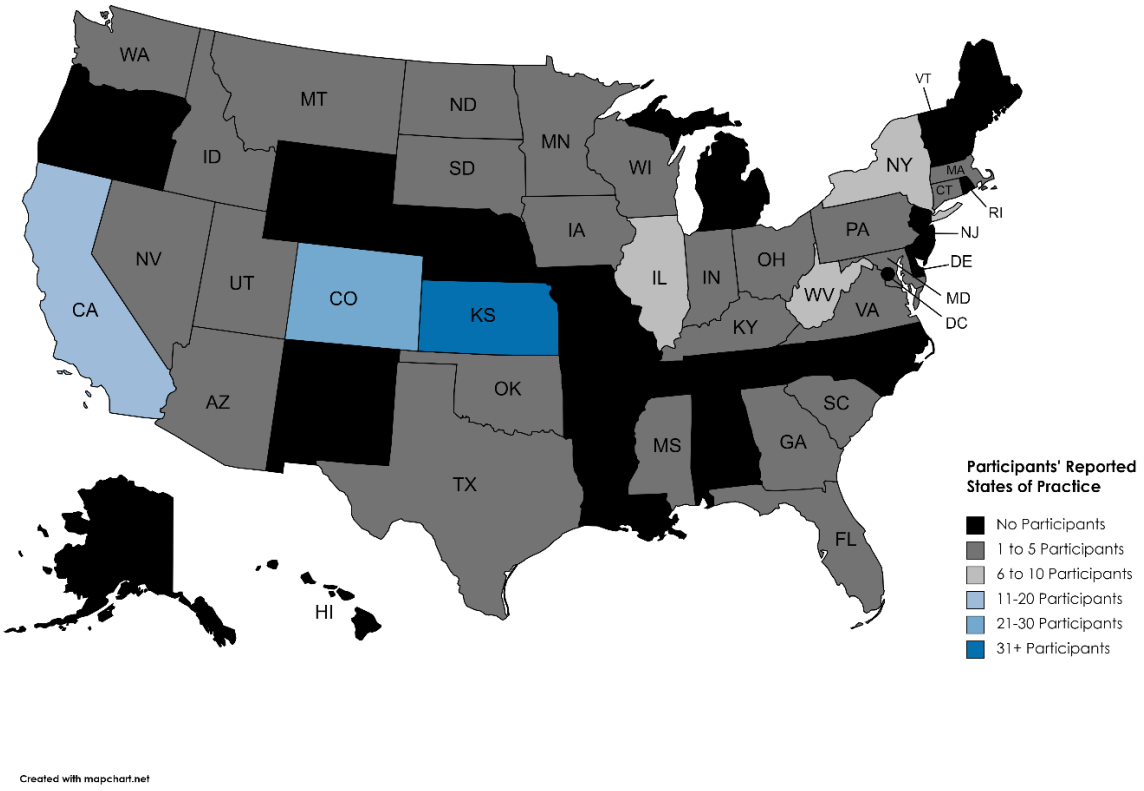
The principal investigator was able to locate contact information for 49 school psychology state organizations, with New Mexico being the only state contact information for a school psychology state organization was not found. Some organizations did not respond and many required paid memberships to send out survey requests. The principal investigator posted a slightly modified version of the email on the Said No School Psychologist Ever Facebook page twice. All requests for research participation were sent between May 2022 and November 2022.

A total of 216 individuals began the survey and 212 provided consent. Of the 212 participants who consented to participating in the survey, 21 respondents did not meet the criteria of having been a practicing school psychologist since 2019. Of the 191 school psychologists who

met the survey criteria, 124 completed the survey. This reduced the power of the analysis from 0.80 to 0.73. A power of 0.80 is generally preferred (Agresti, 2018). A graphic of states and the number of school psychology participants who completed the study is presented in Figure 3 while a list of states and the specific number of participants is included in Appendix E.

Figure 3

School Psychologist Participation by State



Participants from 32 different states completed the survey and some participants worked in multiple states between 2019 and 2021. Kansas provided the greatest number of participants with 35 school psychologists completing the survey. Colorado and California also had notable participation rates while the majority of states had less than 10 respondents. By region, as determined by the United States Census Bureau-designated regions (Wikimedia Foundation,

2023), the Midwest supplied the greatest number of participants (54, or 39.71%), followed by the West (41, 30.15%), the South (24, 17.65%), with the fewest number of participants coming from the North East (17, 12.50%).

Of the respondents who completed the survey, the majority (70.97%) reported having an Educational Specialist, or Ed.S. degree, followed by individuals with Masters degrees (14.52%), PhDs (8.87%), and PsyDs (1.61%). In addition, 3.23% of respondents reporting having a different degree than listed. In terms of experience, 19.35% of respondents reported having less than 5 years of experience as a school psychologist, 30.65% reported having between 5 and 9 years of experience, 24.19% reported having between 10 and 19 years of experience, and 25.80% reported having 20 or more years of experience.

Participants reported on the school settings they worked in during the 2019-2020 and 2020-2021 academic years and many participants reported working in multiple settings; for example, a school psychologist may have worked in both an elementary school and a high school. The reported school settings are displayed in Table 1.

Table 1

Reported School Settings by School Year

	Raw # Reported	
School Setting	2019-2020	2020-2021
Elementary School	67	71
Middle School	36	34
High School	35	35
PreK / K-8	15	14
PreK / K-12	25	24

Technology

School psychologists reported using a variety of technology-based resources that they utilized in their transition. Most commonly reported was Zoom (41) followed by Google Meet (17) and Teams (8). Participants also commonly reported utilizing NASP and state-based school psychological organizations (e.g., KASP), Google Drive (15), and online scoring platforms (9) such as QGlobal/Pearson. Less commonly reported resources reported by at least 2 individuals include Teachers Pay Teachers (5), Schoology (3), and YouTube (2). Various student engagement platforms were also listed including SeeSaw (3), Kami (2), and PearDeck (2), Individuals also reported utilizing technology such as Adobe for online signatures (2), Google Voice (3), and DocHub (2). Based on these results, it appears that videoconferencing technology was a critical resource used to support online school psychological services. School psychologists also reported a reliance on state, district, and school psychology organization's guidance to support best practices during this challenging educational period. Less commonly reported were education-specific applications, such as Kami and SeeSaw, that provide virtual venue where users can engage with educational content. A full list of all the resources listed by participants is provided in Appendix F.

Time Spent in Service Domains

Prior to the pandemic, the three primary areas school psychology practitioners reported spending the majority their time in were consultation and collaboration, assessment, and intervention (Hosp & Reschly, 2002; Larson & Choi, 2010). As the Coronavirus-19 pandemic significantly disrupted education during 2020, it is critical to investigate how school psychologists' service time spent in these areas changed between 2019 and 2021. Assumptions for repeated measure ANOVAS include a continuous dependent variable, related groups, no

outliers, normally distributed dependent variable, and sphericity. For the present investigation, the dependent variable of the percentage of time spent in different service areas is continuous and the same participants completed the questions for each time point, so the groups are related. Data distribution and sphericity are discussed within each respective section.

Consultation and Collaboration

The tests of normality conducted for the reported percentage of time spent in consultation and collaboration services prior to the Coronavirus-19 pandemic was skewed to the right and the Shapiro-Wilk test of normality confirm that the assumption of normality is violated ($W = 0.91$ $p < .001$). Participants indicated that they spent an average of 33% of their time in consultation and collaboration services prior to the Coronavirus-19 pandemic.

The tests of normality conducted for consultation and collaboration services between March and June of 2020 are closer to normal than for other time periods, although the large standard deviation is notable. The Shapiro-Wilk test of normality indicates that the assumption of normality is violated ($W = 0.95$, $p < .001$) Participants reported spending 49% of their time in consultation and collaboration services during initial online learning, an increase of 16% from prior to the Coronavirus-19 pandemic.

The tests of normality for consultation and collaboration services during the 2020-2021 school year are skewed to the right and the Shapiro-Wilk test of normality shows that the assumption of normality is violated ($W = 0.93$, $p < .001$). Mauchly's Test of Sphericity for consultation and collaboration show that the assumption of sphericity is violated (Mauchly's W = 0.434, $p < .001$). Participants reported spending an average of 35% of their time in consultation and collaboration services during the 2020-2021 school year with a standard deviation of 0.167. This is comparable to the percentage of time spent in consultation and collaboration services

prior to the Coronavirus-19 pandemic (33% of the time) while participants reported an increase in consultation and collaboration services to an average of nearly 50% of their time between March and June of 2020. One-way repeated measures ANOVA between these time periods indicate a significant increase of 16%, 95% CI [-0.236 - -0.094], $p < .001$ of time spent in consultation and collaboration from prior to the Coronavirus-19 pandemic to during the pandemic between March and June of 2020. Then, the amount of time school psychology practitioners reported spending in consultation and collaboration significantly decreased by 14%, 95% CI [0.072 - 0.207], $p < .001$ during the 2020-2021 school year. There was not a significant difference in the percentage of time spent in consultation and collaboration from prior to the Coronavirus-19 pandemic and the 2020-2021 academic year, with an increase of 2%, 95% CI [-0.055 – 0.004], $p = .119$. These results indicate that practitioners engaged in much more consultation and collaboration between March and June of 2020. Furthermore, school psychology practitioners were able spend a comparable amount of time in consultation and collaboration after the Coronavirus-19 pandemic as they were prior to the pandemic.

Due to numerous assumption violations and an inability to correct them statistically, non-parametric analyses were utilized to further assess whether or not these changes were significant. The non-parametric Friedman's test of differences with repeated measures was used as an alternative to an ANOVA. The results found a chi-squared value of 30.06, which was significant ($p < 0.05$) and indicate that there is a statistically significant difference in the amount of time school psychologists spent on consultation/collaboration services throughout the Coronavirus-19 pandemic. While there was a significant difference between all three time points, the effect size was small at only 12.1%. In particular, the difference between pre-pandemic and post-pandemic

time spent in consultation and collaboration was negligible, with only a 2% difference between means. The significance values of these time changes are displayed in Table 2.

Table 2

Consultation and Collaboration Time Changes

		Adjusted *p*-value
Pre-Pandemic	During the Pandemic	$p < 0.0001$
Pre-Pandemic	2020-2021 School Year	$p = 0.007$
During the Pandemic	2020-2021 School Year	$p < 0.001$

Assessment

Tests of normality for the percentage of time spent in consultation and collaboration during the 2019-2020 school year prior to March appear to meet the assumption of normality on a bar graph with an average of 50% of reported time being spent in assessment services and a standard deviation of .211. The Shapiro-Wilk test of normality confirmed that the reported time spent in assessment prior to the Coronavirus-19 pandemic did meet the assumption of normality ($W = 0.98$, $p = 0.066$).

Tests of normality for the reported percentage of time spent in assessment serviced between March and June of 2020 are quite skewed to the right and the Shapiro-Wilk test of normality confirms that this assumption is violated ($W = 0.799$, $p < 0.001$). Participants reported an average of 17% of the time spent in assessment services between March and June of 2020, with a standard deviation of 0.206. Compared to prior to the Coronavirus-19 pandemic, this was a significant decrease of 33%, 95% CI [0.282 – 0.388], $p < .001$.

Tests of normality for the reported percentage of time spent in assessment during the 2020-2021 school year are somewhat normal with a slight skew to the left. The Shapiro-Wilk test of normality confirmed that the assumption of normality is met for reported time spent in assessment during the 2020-2021 school year (W = 0.971, 0.009). Mauchly's Test of Sphericity for assessment showed that the assumption of sphericity is violated (Mauchly's W = 0.764, p < 0.001). Participants reported an average of 53% of their time spent in assessment during the 2020-2021 school year, which is a noticeable increase from March to June of 2020, but is comparable to prior to the Coronavirus-19 pandemic. One-way repeated measures ANOVAs indicate that there was a significant decrease of 33%, 95% CI [0.282 - 0.388], p < .001. in the amount of time spent on assessment services from prior to the pandemic to March 2020 through June 2020. Then, a significant increase of 36%, 95% CI [-0.418 - -0.311, p < .001) when schools returned in the 2020-2021 school year. There was not a significant difference in the amount of reported time spent in assessment services from prior to March 2020 and during the 2020-2021 school year, 95% CI [-0.064 - 0.005], p = 0.114.

Due to numerous assumption violations and an inability to correct them statistically, non-parametric analyses were utilized to further assess whether or not these changes were significant. The non-parametric Friedman's test of differences with repeated measures was used as an alternative to an ANOVA. The results found a chi-squared value of 157.0, which was significant (p < 0.0001) and indicate that there is a statistically significant difference in the amount of time school psychologists spent on assessment services during the Coronavirus-19 pandemic compared to before the pandemic and during the 2020-2021 school year. Furthermore, this had a large effect size of 63%. The significant values of these time changes are displayed in Table 3.

Table 3

Assessment Time Changes

		Adjusted p-value
Pre-Pandemic	During the Pandemic	$p < 0.001$
Pre-Pandemic	2020-2021 School Year	$p = 0.239$
During the Pandemic	2020-2021 School Year	$p < 0.001$

Intervention

Tests of normality for the reported percentage of time spent in intervention services during the 2019-2020 school year prior to March are strongly skewed to the right and the Shapiro-Wilk test of normality confirms that assumption is violated ($W = 0.835$, $p < .001$). Participants reported an average of 20% of their time spent in intervention services, with a standard deviation of 0.19.

Tests of normality for reported percentage of time spent in intervention services between March and June of 2020 are strongly skewed to the right and the Shapiro-Wilk test of normality confirms that this assumption is violated (W = 0.72, $p < .001$. Participants reported an average of 16% of their time spent in intervention services between March and June of 2020 with a standard deviation of 0.224. This was a significant decrease of 4%, 95% CI [0.001 - 0.068], $p = .042$.

Tests of normality for the reported percentage of time spent in intervention services during the 2020-2021 school year are skewed to the right and the Shapiro-Wilk test of normality confirms this assumption is violated ($W = 0.859$, $p < .001$). Mauchly's Test of Sphericity for intervention services showed that the assumption of sphericity assumption is violated (Mauchly's W = 0.856, $p < 0.001$). Participants reported an average of 22% of their time spent in intervention services during this year. A one-way repeated measures ANOVA showed that

participants reported a significant decrease of 4%, 95% CI [0.001 - 0.068], $p = 0.042$ of their time spent in assessment services from prior to the Coronavirus-19 pandemic and between March and June of 2020. Then, participants reported a significant increase of 6%, 95% CI [-0.107 - -0.019], $p = .002$ when they returned to school for the 2020-2021 academic year. There was not a significant difference in the reported percentage of time spent in intervention services from prior to the Coronavirus-19 pandemic and during the 2020-2021 school year with an increase of 2%, 95% CI [-0.062 - 0.005], $p = 0.122$. These results indicate that school psychology practitioners experienced a small, but significant decrease in the amount of time they spent in intervention services between March 2020 and June 2020 compared to both prior and after that time. In addition, school psychologists were able to return to the 2020-2021 academic year with comparable time spent in their main service areas as they spent prior to the Coronavirus-19 pandemic.

Due to numerous assumption violations and an inability to correct them statistically, non-parametric analyses were utilized to further assess whether or not these changes were significant. The non-parametric Friedman's test of differences with repeated measures was used as an alternative to an ANOVA. The results found a chi-squared value of 42.8, which was significant ($p < 0.0001$) and indicate that there is a statistically significant difference in the amount of time school psychologists spent on intervention services throughout the Coronavirus-19 pandemic. While there was a significant difference between all 3 time points, the effect size was small at only 17.2%. In particular, the difference between pre-pandemic and during the 2020-2021 school year time spent in consultation and collaboration was negligible, with only a 2% difference between means. The significant values of these time changes are displayed in Table 4. The

means and standard deviations of the reported percentage of time spent in all service domains is presented in Table 5 and a graph with that information is displayed in Figure 4.

Table 4

Intervention Time Changes

		Adjusted p-value
Pre-Pandemic	During the Pandemic	$p = 0.011$
Pre-Pandemic	2020 – 2021 School Year	$p = 0.011$
During the Pandemic	2020 – 2021 School Year	$p < 0.0001$

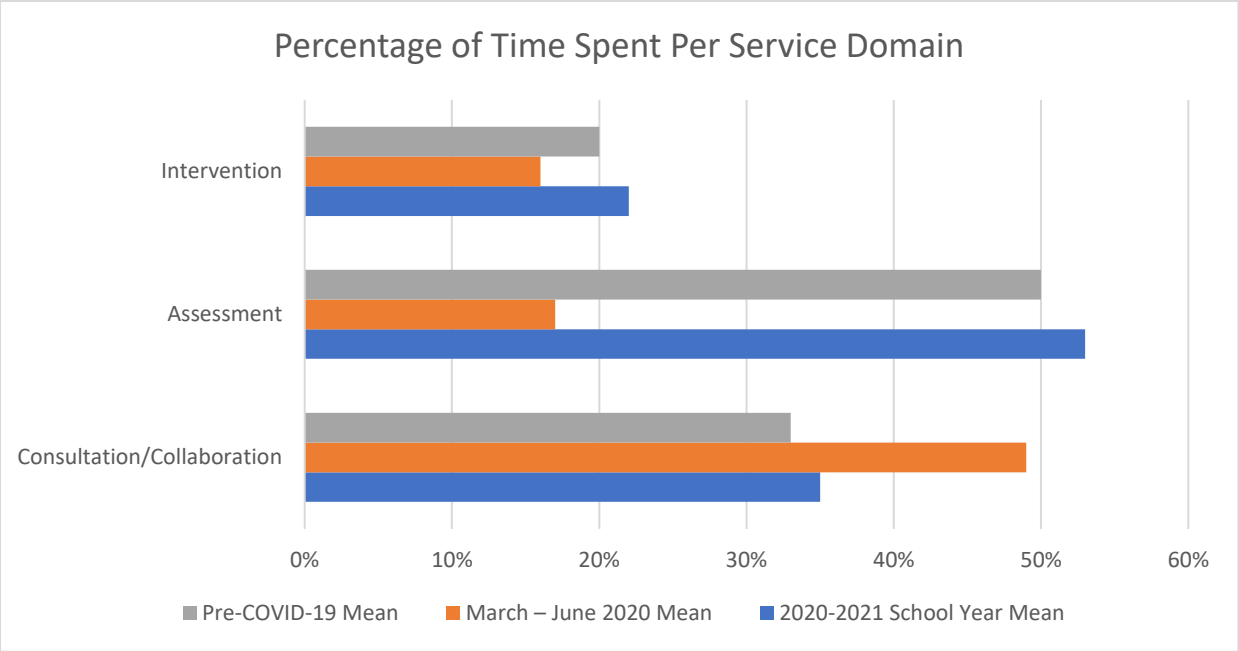
Table 5

Means and Standard Deviations for Reported Percentage of Time Spent Per Service Domain

Service Domain	Pre-Pandemic		March-June 2020		2020-2021 School Year	
	M	*SD*	*M*	*SD*	*M*	*SD*
Consultation/Collaboration	33	0.17	49	0.301	35	0.167
Assessment	50	0.211	17	0.206	53	0.196
Intervention	20	0.19	16	0.224	22	0.186

Figure 4

Average Percentage of Time Spent Per Service Domain

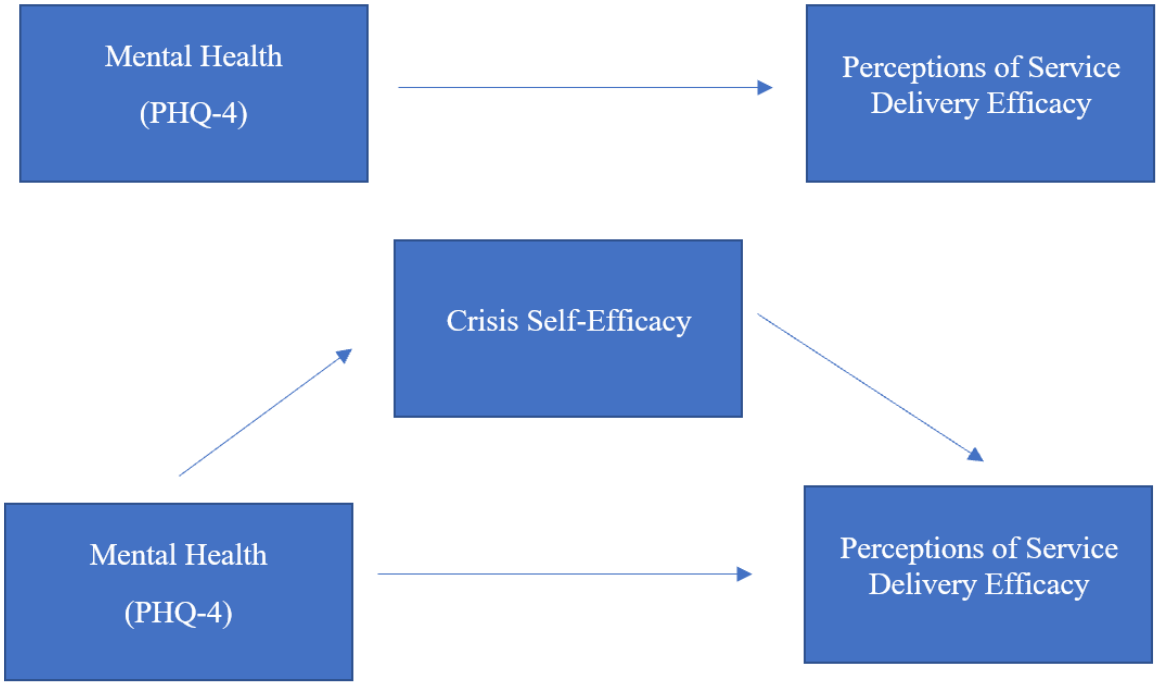


Mental Health, Perceptions of Service Delivery, and Crisis Self-Efficacy

In order to investigate whether school psychologists' crisis self-efficacy mediates the relationship between their mental health symptoms (PHQ-4) and their perceptions of service delivery, structural equation modeling was conducted. A model of these hypothesized relationships is displayed in Figure 5.

Figure 5

Mediation Analysis Model



The assumptions of structural equation modeling include normality, lack of missing data, lack of measurement and sampling errors, and model fit. This research investigation utilized maximum likelihood estimation techniques which assume normality. There were no missing values in this dataset. The assumption of measurement and sampling errors was assumed to be met due to all participants completing the same survey. The model fit indices were acceptable and are presented in Table 6.

Table 6

Model Fit Indices

Model Fit Index Name	Value	Threshold	Interpretation
Goodness of Fit (GFI)	1	0.95	Satisfactory
Adjusted Goodness of Fit (AGFI)	1	0.90	Satisfactory
Normed Fit Index (NFI)	1	0.90	Satisfactory
Bentler-Bonett Non-Normed Fit Index (NNFI)	1	0.90	Satisfactory
Comparative Fit Index (CFI)	1	0.90	Satisfactory
Root Mean Square Error of Approximation (RMSEA)	0	0.05	Satisfactory
Standardized Room Mean Square Residual (SRMR)	0	0.08	Satisfactory
Relative Fit Index (RFI)	1	0.90	Satisfactory
Incremental Fit Index (IFI)	1	0.90	Satisfactory

All participants completed the Patient Health Questionnaire-4 (PHQ-4). Response options included 0 for Not at all, 1 for several days, 2 for more than half the days, and 3 for nearly all the days. Results of the PHQ-4 generally indicate a low prevalence of mental health symptoms among participants at the time of survey completion. With respect to feelings of nervousness or anxiety, 75% of participants reported being bothered “Not at all” or “Several Days.” A similar pattern was seen among the other questions, as 83.1% of respondents reported minimal worries, 88.7% reported minimal feelings of depression, and only 13% of participants reporting being bothered by a lack of interest or pleasure. Descriptives of the PHQ-4 results are presented in Table 7.

Table 7

Patient Health Questionnaire-4 Descriptives

Question	*M*	*SD*
Over the past 2 weeks, how often have you been bothered by feeling nervous, anxious, or on edge?	2.03	0.945
Over the past 2 weeks, how often have you been bothered by not being able to stop or control worrying?	1.70	0.901
Over the past 2 weeks, how often have you been bothered by feeling down, depressed, or hopeless?	1.57	0.838
Over the past 2 weeks, how often have you been bothered by having little interest or pleasure in doing things?	1.58	0.875

All participants completed the Crisis Self-Efficacy Index. Response options ranged from 1 Strongly Disagree to 5 Strongly Agree, with 3 being a neither option. Results of the Crisis Self-Efficacy index was fair, with participants generally indicating agreement on their abilities during crisis. Participants indicated stronger feelings of self-efficacy on items that focused on assisting others or utilizing resources. Participants indicated less feelings of efficacy on items related to adhering to and accomplishing goals. Descriptives from the Crisis Self Efficacy Index are displayed in Table 8.

Table 8

Criss Self-Efficacy Index Descriptives

Question	*M*	*SD*
I am certain I have the ability to take necessary action to protect myself during a crisis.	4.16	0.868
I know that I have the ability to do things to protect myself in case of a crisis.	4.27	0.837
What I do with the knowledge I have about a crisis will keep me safe.	4.04	0.966
I can help others decide what actions to take during a crisis.	4.23	0.818
I can anticipate likely events during a crisis.	3.88	0.898
I am able to use resources effectively during a crisis.	4.17	0.773
Given enough time and effort, I believe I can solve most problems during a crisis.	4.09	0.776
When faced with a novel situation, I have confidence that I can handle problems that may arise during a crisis.	3.99	0.811
During a crisis, I can stick to my goals.	3.73	0.989
During a crisis, I can accomplish my goals.	3.59	0.902
I am confident that I can deal efficiently with unexpected crisis situations.	4.02	0.786
Thanks to my resourcefulness, I know how to handle unforeseen situations during a crisis.	4.05	0.795
During a crisis, I can usually handle whatever comes my way.	4.03	0.845
During a crisis, I can achieve most of the goals I have set for myself.	3.72	0.916

In order to create a succinct factor to represent school psychologists' perceptions of their service delivery efficacy during the Coronavirus-19 pandemic, a dimensionality reduction was

conducted with items 22 (reverse coded), 23, 25, 28 (reverse coded), 29, 30 (reverse coded), 39, and 40. This was completed in order to identify and simplify the subset of items that should be used in the structural equation modeling analysis to represent school psychologists' perceptions of service delivery. These items, along with their means and standard deviations are presented below. Lower numbers represent disagreement with the statement while numbers closer to 5 indicate higher levels of agreement. The means and standard deviations for participant responses to the items included in the dimensionality reduction are presented in Table 9.

The final result of the dimensionality reduction indicating the highest interrater reliability included items 23, 25, 29, 39, and 40 with an overall Cronbach's alpha of 0.818, which is considered acceptable (Bland & Altman, 1997). Then, structural equation modeling was conducted. The endogenous variable was the Patient Health Questionnaire-4 (PHQ-4) while the exogenous variable was perceptions of service delivery. Results from this analysis are presented in Table 10 and show the strength (SE) of the relationship between each of the variables. A visual model indicating the strengths of the relationships among these variables is presented in Figure 6.

Table 9

Dimensionality Reduction Items

		M	*SD*
23.	I prefer providing assessment services in-person rather than online.	4.790	0.768
25.	I prefer providing intervention services in-person rather than online.	4.492	0.906
29.	I feel my consultation services are more effective when conducted in-person than virtually.	3.992	1.071
39.	My students seem more engaged with in-person services than with virtual services.	4.548	0.82
40.	I think my students benefit more from in-person services than virtual services.	4.726	0.654
Not Included in Final Model			
22.	I feel I am as effective an assessor when assessing online as I am when I am assessing in-person. (Reverse Coded)	3.363	0.922
28.	I feel my students are more engaged with virtual services than in-person services. (Reverse Coded)	3.347	0.911
30.	I find it easier to come up with useful ideas when consulting and collaborating virtually rather than in-person.	2.323	0.924

Table 10

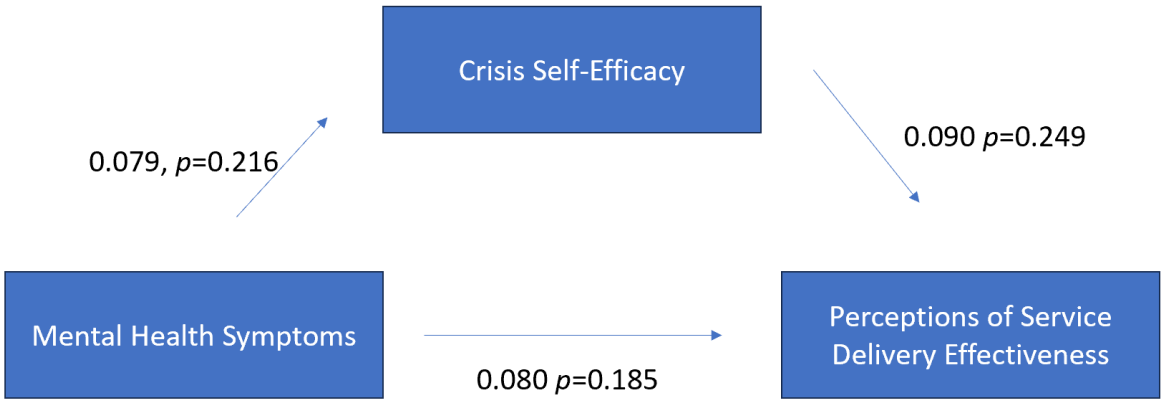
Effects and Significance for Structural Equation Modeling

Relationships	Unstandardized	SE	*p*-value
PHQ-4 -> Service Delivery	0.106	0.080	0.185
PHQ-4 -> Crisis Self Efficacy	-0.098	0.079	0.216
Crisis Self Efficacy -> Service Delivery	0.104	0.090	0.249

Note. The PHQ-4 refers to the Patient Health Questionnaire-4.

Figure 6

Structural Equation Model Effect Sizes and Significance



Structural equation modeling with mental health symptoms (PHQ-4), crisis self-efficacy (Crisis Self-Efficacy Index), and a 5-item factor representing perceptions of service delivery efficacy from the School Psychology Services During the Coronavirus-19 Pandemic survey, failed to find a significant relationship between any variables with standardized estimates. The relationship between mental health symptoms and was not significant (*SE* = 0.080, *p* = 0.185). The relationship between mental health symptoms and crisis self-efficacy was not significant (*SE* = 0.079, *p* = 0.216). Lastly, the relationship between crisis self-efficacy and perceptions of

service delivery efficacy was not significant (*SE* = 0.090, *p* =0 .249). As shown in Table 11, the total effect of the model was negative (ACMD = -0.0102, *p* = 0.80), indicating that crisis self-efficacy did not contribute in any way to the relationship between school psychologists' mental health symptomology and perceptions of their service delivery efficacy when online during the Coronavirus-19 pandemic.

Table 11

Total Effect Size Results

	Estimate	95% Lower	95% Upper	*p*-value
Average Causal Mediation Effects (ACME)	-0.0102	-0.0493	-0.-4	0.80
Average Direct Effects (ADE)	0.1060	-0.0623	0.27	0.22
Total Effect	0.0959	-0.0516	0.23	0.18
Prop. Mediated	-0.1062	-1.1413	0.87	0.71

Conclusion

With regard to the first research question, analyses indicate that school psychologists significantly increased the amount of time spent in consultation and collaboration when schools initially transitioned to online learning. By the 2021-2022 school year, the percentage of time spent in this domain was comparable to pre-pandemic levels. Alternatively, the amount of time school psychologists reported spending in assessment and intervention services significantly decreased when schools transitioned online and then returned to levels comparable to before the Coronavirus-19 pandemic. These align with the respective hypotheses for each service domain.

With regards to the second research question, participants reported minimal mental health symptoms at the time of survey completion. They also generally reported moderate levels of

crisis self-efficacy during the Coronavirus-19 pandemic necessitated distance learning. Structural equation modeling was unable to identify whether a relationship between participants' reported mental health, crisis self-efficacy, and perceptions of service delivery effectiveness online versus in person exists.

CHAPTER V

DISCUSSION AND CONCLUSION

This research inquiry delved into school psychology practitioners' experiences throughout the Coronavirus-19 pandemic. The pervasive influence of the Coronavirus-19 pandemic resulted in a rapid transition to online learning for public education students in the United States. Educators, including school psychologists, had to promptly and efficiently transition their services to a virtual format amidst increased mental health concerns throughout the population (Davis, 2021; Garet et al., 2020; Marshall et al., 2020).

Research on the effects of the Coronavirus-19 pandemic in a variety of fields including school psychology is quickly increasing in availability but has not yet been thoroughly investigated. Further research is needed to explicate the resources school psychologists utilized, how their activities changed, and how they felt about their services and their ability to provide services throughout the Coronavirus-19 pandemic. To investigate how school psychologists worked throughout the Coronavirus-19 pandemic, a survey was disseminated to school psychologists. Participants reported on the resources they utilized to support their transition to and provision of virtual services. Participants also reported on the percentage on time spent in the three main areas of service delivery: consultation and collaboration, assessment, and intervention.

Summary of Findings

Results from the present investigation indicate that following the shift to online education around March of 2020, school psychologists notably augmented the amount of time they spent in

consultation and collaboration, while concurrently decreasing the amount of time spent in assessment and intervention services. This is unsurprising given the increased needs of students, teachers, and families during the transition to, and during, online learning, that required consultative support. Furthermore, the challenges associated with testing and direct intervention services, coupled with decreased student attendance, likely impeded the capacity of school psychologists to actively engage in assessment and intervention services.

This investigation also inquired into the relationships between school psychologists' reported mental health symptoms, feelings of service delivery efficacy in the areas of consultation, assessment, and intervention, and feelings of crisis self-efficacy. Notably, none of the relationships between reported mental health symptoms, perceptions of service delivery, and crisis-self efficacy were significant. Because the data were not significant, this research investigation is unable to determine whether or not a significant relationship between these variables exists. It is possible that this lack of findings is due to the insufficient power related to the sample size or due to the timing of when the participants reported on their mental health symptoms.

Implications for Practice

School psychologists seemingly were unable to provide adequate mental health intervention services for students throughout online learning, as found in the present research investigation. It is likely that this increase in student mental health symptoms throughout the Coronavirus-19 pandemic is related to the concurrent decrease in school psychological intervention services during this time. The Coronavirus-19 pandemic was a time of increased psychological distress globally (Casagrande et al., 2020; Conti et al., 2020; Craig et al., 2020; Daly et al., 2022; Fitzpatrick et al., 2020; Hawke, Barbic et al., 2020; Liang et al., 2020;

McGinty et al., 2020; Nearchou et al., 2020). Educators reported that student mental health became a high priority concern because of the Coronavirus-19 pandemic and its far-reaching consequences (Kranz et al., 2022). Initial research during the Coronavirus-19 pandemic found international evidence of increased psychological distress, particularly between April and June of 2020 (Czeisler et al., 2020; Daly et al., 2022; McGinty et al., 2020). Studies on school psychological services during the Coronavirus-19 pandemic also found strong evidence of increased mental health symptomology among their students, with school psychologists (Reupert, Greenfield, et al., 2022) and parents (Goldberg et al., 2022) highlighting the influence of increased social isolation negatively affecting their students.

In addition to students being challenged by their mental health, youth also experienced difficulties with distance education during the Coronavirus-19 pandemic. These difficulties may be related to the increase in consultation and collaboration services experienced by school psychologists in this research investigation, as school psychologists sought to best support their students learning online. Supporting students' online learning likely included consulting with teachers and parents about best practices in online education and in managing behaviors such as hyperactivity. School psychologists in Australia reported that students with executive functioning challenges experienced extreme difficulties with online learning, which was previously discussed as an expected result of distance education (Reupert, Greenfield, et al., 2022). In addition, among Chinese students, one's ability to be motivated and proactive in their learning mediates the relationship between mental health and academic achievement (Wang et al., 2023). Parents also reported their own challenges with the increased expectations of them as educators for their children, balancing their role as educators and their own work life, and with children's low motivation during online learning (Goldberg et al., 2022).

The Coronavirus-19 pandemic also disproportionately impacted minoritized individuals and the lack of school psychological intervention services available to these individuals during the Coronavirus-19 pandemic may have exacerbated the negative effects of the pandemic for these groups. For example, individuals of color had higher mortality rates for the COVID-19 virus compared to white individuals in the United States, and this was influenced by socioeconomic status (Pathak et al., 2022). People in the United States and Canada who lived in lower-income areas and/or areas with high proportions of ethnic minorities were more likely to be infected with the COVID-19 virus (Fish et al., 2023; Srivastava et al., 2022). School psychologists in the present investigation reported significant decreases in intervention services during the Coronavirus-19 pandemic, which would have limited access to intervention services for minoritized students. In small, qualitative investigations, school psychologists in the United States reported that they saw changes in their individual caseloads that reflected a disproportionate impact of the Coronavirus-19 pandemic as demonstrated by an increase in needs for children of color and those experiencing homelessness (Hunt et al., 2023). Students who attended schools in rural areas and/or in areas with high levels of poverty had fewer opportunities to participate in mental and behavioral health interventions (Moore et al., 2023). In New York, students who were identified as low-income, urban, or experiencing homelessness, as well as English language learners and those with disabilities were all less likely to have someone in their home available to assist them with their education during online learning (Fox et al., 2021). In the United States, caregivers of children with developmental delays reported more concerns related to decreased access to educational services during the Coronavirus-19 pandemic compared to caregivers of typically developing students (Martin et al., 2023). Overall, individuals/communities that were impoverished, rural, of color, or holding a marginalized

identity were at increased risk for experiencing negative effects of the Coronavirus-19 pandemic (Dvorsky et al., 2023).

Technology and Resources

This research will be valuable for current and future school psychology practitioners working with students who experienced the Coronavirus-19 pandemic and/or provide virtual school psychological services. Resources discussed in this investigation help to increase the number of resources school psychology practitioners are aware of. This research also highlighted the importance of videoconferencing platforms such as Zoom, Google Meets, and Microsoft Teams in providing virtual services, as they provided a meeting "place" for educators and students to work together in real time. This may help guide current and future practitioners who are unsure of which video conferencing technologies are most widely used for service delivery The current research investigation aligns with other research on school psychological practice during the Coronavirus-19 pandemic. School psychology practitioners globally reported increased dependence on technology throughout the Coronavirus-19 pandemic, video-conferencing technologies in particular (Berger et al., 2023; Hyde et al., 2022; Schaffer et al., 2021). In the United States, school psychologists reported use of Zoom and Google Meets more than other videoconferencing options (Schaffer et al., 2021). These results are very similar to the results of this investigation, although in their study more participants reported using Google Meets than Zoom (Schaffer et al., 2021). In addition to videoconferencing technology, school psychologists also reported on other virtual tools they used throughout the Coronavirus-19 pandemic. Other investigations found that virtual whiteboards were reported as being useful throughout online service provision (Hyde et al., 2022).

In the present investigation, as with much other research in this area, school psychologists reported that virtual service delivery via video conferencing technology was critical for maintaining school psychological service delivery during the Coronavirus-19 pandemic. Research on school psychological practice during the Coronavirus-19 pandemic may be useful for practitioners who primarily or solely serve students virtually (e.g., Presence Learning). School psychology practitioners reported difficulties building rapport with students virtually, although they noted that some students appeared to prefer to engage in therapeutic activities virtually compared to in-person (Reupert, Greenfield, et al., 2022). This preference signals a shifting landscape in student preference, which could influence future service delivery. In this qualitative, interview-based investigation, Australian school psychologists reported that they were not always able to ensure that students had access to a fully confidential and private space for virtual counseling and reported some of their own challenges with ensuring that their working space provided adequate confidentiality for both themselves and their students (Reupert, Greenfield, et al., 2022). Other research with school psychologists after the Coronavirus-19 pandemic has noted similar concerns (Berger et al., 2023). School psychologists have also highlighted the benefits of increased scheduling flexibility for their students (Reupert, Greenfield, et al., 2022). It is clear that the transition to virtual service delivery introduced a dynamic interplay of challenges and opportunities for school psychologists and those they work with. Student preferences for in-person versus virtual services, challenges with confidentiality, and the benefits of increased scheduling flexibility all lend themselves to creating a nuanced picture of the changing landscape of school psychological practice. Perhaps the plethora of difficulties experienced by both students and service providers/educators is related to the decrease in intervention services provided throughout the Coronavirus-19 pandemic. It is

possible that many individuals were simply not able to overcome an obstacle preventing them from engaging in online intervention, such as internet issues. A comprehensive approach to addressing these challenges while leveraging the advantages of virtual practice may be beneficial for improving virtual school psychological practice.

Time Spent in Service Domains

This research investigation may help prepare and guide practitioners in cases of future crises and unexpected changes in education. For example, school psychologists can now expect that they will likely experience increased consultative demands and decreased assessment and intervention demands during online service delivery and in cases when school districts are experiencing severe and rapid changes, such as during the Coronavirus-19 pandemic. These changes in service delivery are supported by other research on school psychology practice during the pandemic. A research investigation with participants from the United States, Germany, Australia, and Canada found that practitioners experienced a period of increased consultation and mental health counseling in combination with a decrease in assessment services (Reupert, Schaffer, et al., 2022). Similar results were found in another investigation with participants from the United Kingdom, the United States, Canada, Germany, and Australia (May et al., 2023). In addition, Canadian school psychologists reported decreases in assessment and mental health intervention services with increases in consultation and professional development (Ritchie et al., 2021). Australian school psychologists reported a similar pattern, noting a decrease an assessment services with an increase in consultation and collaboration with parents and families (Reupert, Greenfield, et al., 2022).

The current research investigation did not differentiate between behavioral intervention and mental health intervention services, which may account for the differences between studies

in regard to time spent in intervention services. Mental health intervention encapsulates counseling services, while behavioral intervention may require in-person work or be irrelevant outside of the classroom setting, thus mental health interventions are more adaptable to virtual, rather than in-person, delivery. Research on school psychological evaluation during the Coronavirus-19 pandemic in the United States confirm that school psychologists generally reduced in-person evaluations, and some transitioned to virtual assessment services (Hunt et al., 2023). This decrease in the percentage of time spent is assessment is a significant deviation from historical norms, particularly compared to before the Individuals with Disabilities Education Act (IDEA) was implemented (Hosp & Reschly, 2002). This change in service time indicates that school psychologists who only provide virtual services may spend their time differently compared to in person school psychologists. Further research is needed to explore whether a true difference exists in the amount of time spent in service domains for virtual versus in person school psychologists.

The present investigation found a significant decrease in assessment services during the Coronavirus-19 pandemic, which may be related to a variety of factors. School psychologists have reported that they had little guidance surrounding evaluations during the Coronavirus-19 pandemic from their school districts (Hunt et al., 2023). They also emphasized that this lack of guidance from their administration surrounding evaluation procedures continued once schools returned to in-person learning amidst mask mandates and social distancing. They reported that they had to rely on colleagues and school psychological organizations (e.g., NASP) for recommendations (Hunt et al., 2023). They also discussed concerns about the validity of testing conducted during the Coronavirus-19 pandemic, including questionnaire and observation results, due to changes from standardization and due to the unique conditions that everyone was living

with at the time (Hunt et al., 2023). This was a concern noted by NASP (2020c) at the beginning of the pandemic.

After schools transitioned to distance learning because of the Coronavirus-19 pandemic, NASP released a variety of recommendations to guide school psychology practitioners as they returned to in-person education. Many of these recommendations were rooted in increased intervention and intervention prior to special education referrals and evaluation (NASP, 2020a, 2020c). In the United States, school psychologists reported that they did not provide more intervention services after returning to in-person learning compared to prior to the Coronavirus-19 pandemic (Schaffer et al., 2021). The current research investigation supports these findings, as participants did not report a significant difference in the amount of time spent in intervention during these time periods. This indicates that schools may not have significantly increased their intervention services prior to evaluating students for special education eligibility. This lack of intensive intervention may have led to potential overqualification of students for special education over the past couple years.

Mental Health, Crisis Self-Efficacy, and Perceptions of Service Delivery

For the current research investigation, school psychologists reported on their mental health symptoms at the time of survey completion. In general, they reported minimal mental health symptoms. However, this does not align with research on mental health during the Coronavirus-19 pandemic. Research with school psychologists in Australia found that school psychologists experienced challenges with ethics, working from home, virtual service delivery, and managing the expectations of their role (Hyde et al., 2022). School psychologists generally found the Coronavirus-19 pandemic to be a time of increased stress (Hyde et al., 2022; Perry, 2022). It was likely that the results of the present research investigation did not align with other

research due to participants reporting on their mental health symptoms during 2022, not during the height of the Coronavirus-19 pandemic. School psychologists may have experienced a reduction in mental health symptoms between Spring of 2020 and the time of survey completion.

In the present investigation, findings from the Crisis Self-Efficacy index reveal participants' moderate self-assessment of their crisis management abilities. Participants reported higher self-efficacy feelings when it came to aiding others and utilizing available resources. However, participants demonstrated comparatively lower self-efficacy feelings concerning the aspects of adhering to and achieving goals during the Coronavirus-19 pandemic. This is similar to other research that has generally found that practitioners had moderate to high levels of self-efficacy throughout the Coronavirus-19 pandemic. Research in Australia found that school psychologists generally reported high levels of self-efficacy in regard to crisis response and post-crisis (Hyde et al., 2022). This investigation also found that school psychologists with over 10 years of practitioner experience had higher levels of self-efficacy, although other areas of therapeutic practice did not show this effect (Hyde et al., 2022). Future research may be interested in exploring the relationship between school psychologists' experience and feelings of self-efficacy and crisis self-efficacy. Studies that compared practitioner's self-efficacy during and prior to the pandemic indicate do demonstrate that self-efficacy was lower during the Coronavirus-19 pandemic compared to before. School psychologists and special education teachers reported decreased self-efficacy for their special education services during distance learning, and practitioners of color reported higher levels of self-efficacy compared to individuals who were white (Womack & Monteiro, 2023). Canadian school psychology practitioners reported decreased in feelings of self-efficacy throughout the Coronavirus-19 pandemic (Ritchie et al., 2021). It is possible that although school psychologist's self-efficacy

was lower during the Coronavirus-19 pandemic compared to before, school psychologists still had moderate levels of self-efficacy during that time. It is also possible that the time of survey completion, 2022, influenced participants' perceptions of their own self-efficacy during the Coronavirus-19 pandemic.

Parents reported mixed perceptions of special education service delivery throughout the Coronavirus-19 pandemic. Speaking in general about special education services, parents reported that some services were ineffective, some accommodations were irrelevant to online learning from home, and other services were effective throughout the Coronavirus-19 pandemic (Goldberg et al., 2022; Greenway & Eaton-Thomas, 2020). Parents reported daily or frequent check-ins with a service provider or educator as beneficial for their students throughout online learning (Goldberg et al., 2022). Research on students in special education during the Coronavirus-19 pandemic has supported these parents' perceptions and generally purport that special education students received inadequate instruction and services during online learning resulting from the Coronavirus-19 pandemic (Dvorsky et al., 2023). It was likely that the increased difficulties for engaging with online learning combined with the decreased intervention services provided by school psychologists throughout the pandemic were related to this perception of special education services being inadequate during this time.

This research was unable to identify a relationship between how school psychologists perceived the effectiveness of their services and their reported mental health symptoms. Further research is needed to identify the influencing factors on school psychologists' perceptions of their service delivery throughout the Coronavirus-19 pandemic and while providing virtual services. There are a variety of potential explanations for this lack of significance. Perhaps the most important potential explanation is that this was partially a retrospective study. The vast

majority of school psychologists had returned to in-person service delivery by the time they completed the survey; however, the questions about mental health symptoms and crisis self-efficacy were focused on the present. It is likely that school psychologists reported mental health symptoms and crisis self-efficacy at the time of survey completion was different than it was during the Coronavirus-19 pandemic and online learning.

Future Research

The coronavirus pandemic affected students and educators globally and its consequences continue to influence education today. Research on the far-reaching outcomes of the Coronavirus-19 pandemic is quickly becoming more available across many fields and professions. It is important to continue to explore the role of technology in education and special education services. Technology is being utilized in a plethora of ways to support education. Video-conferencing, educational videos, and presentation platforms are just a few examples. However, the efficacy of these tools in supporting true growth for students continues to be questioned, particularly for young students and those with certain disabilities. In addition, it is possible that there are negative effects of relying on technology to support educator's work with children.

In addition to technology's role and effects on students in education, it is critical to continue to monitor the mental health effects of the Coronavirus-19 pandemic on youth. The Coronavirus-19 pandemic resulted in increased mental health symptomology among both youth and adults. For youth in particular, this increase in needs was concurrent with a decrease in access to supports, which potentially exacerbated these challenges for many students. It is important to continue to monitor youth's mental and behavioral health needs in order ensure adequate support is being provided to these students in the years after the Coronavirus-19

pandemic. Furthermore, additional research in this area could provide valuable information about how global crises affect mental health symptoms which may help future practitioners develop plans of action to respond to crises that will better address both short-term and long-term mental health concerns.

Due to concerns with the potential for over-identification of students for special education after the Coronavirus-19 pandemic, it is imperious to examine rates of special education qualification in the United States after the Coronavirus-19 pandemic to determine whether there has been an increase, which could indicate over-identification of students for special education services. It appears that schools were not able to provide heightened intervention services after the Coronavirus-19 pandemic prior to evaluation for special education eligibility. This is evidenced by school psychologists reporting comparable time spent in intervention and assessment prior to the pandemic and during the 2020-2021 school year. Due to this lack of intensive intervention as recommended by NASP, it is likely that over-identification for special education services in currently happening in districts around the United States.

Increased student needs and over-identification of students for special education services may be particularly concerning in our current educational climate amidst educator shortages in both general education and special education (Nguyen et al., 2022). The combination of increased student needs and educator shortages may result in escalated challenges in providing free and appropriate education, or in schools reducing the services they provide in students IEPs. This could negatively impact students' growth due to the decreased ability to fully address all students' needs. This could potentially result in a negative cycle where educators are more likely to leave the field of education due to the high levels of student needs that are not adequately

being addressed. Then, the lack of educators contributes to the inability to effectively support student's needs, which helps to maintain challenging behaviors.

In addition to examining the effects of the Coronavirus-19 pandemic on special education in the United States, it is also important to continue to investigate how special education service providers were affected throughout the pandemic and how those affected their service delivery. Increased mental and physical health concerns combined with increased needs for adaptation could have negatively affected service providers' ability to provide effective services. This may have looked like decreased empathy and prosocial behaviors during contentious meetings. In addition, the role of self-efficacy throughout crises in maintaining "normal" or adequate services should be further examined to inform future crises.

Limitations and Recommendations

This dissertation has a variety of limitations. First, the recommended sample size of 159 participants was not reached. Only 124 eligible school psychologists completed the survey, or about 78% of the needed sample size. This reduced the power of the analyses to below 80%, which is generally considered unacceptable (Agresti, 2018). Due to a lack of power, it is possible a true relationship between reported mental health symptoms and perceptions of service delivery exists but was unable to be identified within this dataset. There are a variety of reasons why an adequate sample size was not reached. First, the survey consisted of approximately 50 questions with the demographics section first and many participants failed to complete the survey past the demographics section. It is possible that some practitioners were dissuaded from completing the survey due to the length. If the survey had been shorter or the demographics section had been at the end of the survey may have resulted in a higher proportion of participants completing the survey.

Many test assumptions were also not met in this research investigation and are additional limitations to this study. In order to investigate whether the amount of time spent on consultation and collaboration, assessment, and intervention significantly changed, three repeated measures ANOVAs were conducted. However, the assumptions of normality and sphericity were not met for most of the domains of practice and time periods. This assumption violations may be related to the study's small sample size and because the distributions of time spent in service domain areas was strongly skewed.

Survey collection took a substation amount of time and was quite delayed compared to the time periods of interest, as the survey was sent to school psychology organizations and posted on Said No School Psychologist Ever (SNSPE) between May 2022 until December 2022. This time period of data collection may have negatively affected the validity of the results for a multitude of reasons. Memories fading, changes in mental health symptoms, and differing levels of stress between summer and fall may have affected participants' responses. Data on participants' mental health at that time were not collected. School psychologists' mental health at the time of service delivery may have had an impact on their perceptions of service delivery at that time. As a retrospective survey, there may have been a significant disconnect between participants' mental health while completing the survey compared to when delivering services between March and June of 2020. Furthermore, school psychologists completing the survey while on summer vacation may have answered differently about their mental health symptomology compared to school psychologists who completed the survey at the end of the 2021-2022 school year or at the beginning of the 2022-2023 school year. Lastly, some school psychologists may have not wanted to participate in, or complete, the survey due to it asking about the Coronavirus-19 pandemic. Globally, many individuals were exasperated with the

pandemic by 2022 and simply did not want to think about or discuss it. Overall, the time at which school psychologists completed the survey may have reduced the potential to identify a relationship between their reported mental health symptoms, their perceptions of service delivery, and their crisis self-efficacy.

In addition to the time at which participants completed the survey being a significant limitation to this study, the survey sent to school psychologists itself had limitations, including inconsistencies in how participants were asked about their perceptions of service delivery for consultation and collaboration, assessment, and intervention. Only one question was used to measure self-efficacy for online service provision in each service domain and utilizing additional questions to analyze this concept may have provided more valuable information and more options for analysis. Furthermore, this survey had unacceptable internal consistency. This lack of acceptable internal consistency indicates that this survey may not be accurate in what is it measuring. It is possible that this is related to the variety of concepts that were assessed in the survey, although "subscales" within the survey also did not have acceptable internal consistency. Furthermore, "intervention" was written broadly in this survey and the survey did not differentiate between behavioral and counseling-based intervention. This may have affected the intervention time results as counseling-based interventions are more accessible virtually compared to behavioral interventions. Utilizing a pilot study and administering this questionnaire to a sample group would have been advantageous, as it would have allowed for examination of the psychometric properties of the survey prior to data collection. Using a pilot study would have provided additional information about the usefulness of the included questions and provided a supplemental opportunity to improve the survey.

Conclusion

The purpose of the present study was to investigate how school psychological services in public United States primary and secondary schools changed and adapted in response to the Coronavirus-19 pandemic. Of particular interest was how school psychologists' roles changed in response to the Coronavirus-19 pandemic and online learning, as evidenced by changes in the amount of time spent in the 3 primary service domains of the field. Additionally, this research sought to identify whether school psychologists' crisis self-efficacy was a mediating influence on the relationship between their mental health symptoms and their perceptions of the effectiveness of their virtual service delivery.

Results found that school psychologists significantly decreased the amount of time spent in assessment and intervention services during the Coronavirus-19 pandemic (Spring 2020), which aligns with increased difficulties in providing these services virtually. Consultation and collaborations services, on the other hand, significantly increased during the Coronavirus-19 pandemic, and was able to be provided virtually during the Coronavirus-19 pandemic.

This research investigation was unable to identify any relationships between school psychologists' mental health symptoms, crisis self-efficacy, and perceptions of service delivery efficacy. Thus, crisis self-efficacy cannot be identified as a mediating factor between mental health symptoms and perceptions of service delivery effectiveness.

These results provide implications for future school psychological practice and special education service in general. Of particular concern include growth deficits, both academically and socioemotionally, due to inadequate instruction during the Coronavirus-19 pandemic, and how these will impact student needs and school psychological service in the future. In addition, the potential for overidentification for special education services after the Coronavirus-19 pandemic due to increased needs, an inability to test during the pandemic, and a lack of adequate

intervention services prior to evaluation upon returning to in-person learning after Spring of 2020 is a major concern.

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APPENDIX A

INSTITUTIONAL REVIEW BOARD APPROVAL

UNIVERSITY OF
NORTHERN COLORADO

Institutional Review Board

Date:	03/08/2022
Principal Investigator:	Emily Phillips
Committee Action:	**IRB EXEMPT DETERMINATION – New Protocol**
Action Date:	03/08/2022
Protocol Number:	2201034820
Protocol Title:	SCHOOL PSYCHOLOGICAL SERVICES THROUGHOUT THE COVID-19 PANDEMIC
Expiration Date:	

The University of Northern Colorado Institutional Review Board has reviewed your protocol and determined your project to be exempt under 45 CFR 46.104(d)(702) for research involving

Category 2 (2018): EDUCATIONAL TESTS, SURVEYS, INTERVIEWS, OR OBSERVATIONS OF PUBLIC BEHAVIOR. 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: (i) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects; (ii) Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or (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 45 CFR 46.111(a)(7).

You may begin conducting your research as outlined in your protocol. Your study does not require further review from the IRB, unless changes need to be made to your approved protocol.

As the Principal Investigator (PI), you are still responsible for contacting the UNC IRB office if and when:

UNIVERSITY OF
NORTHERN COLORADO

Institutional Review Board

- You wish to deviate from the described protocol and would like to formally submit a modification request. Prior IRB approval must be obtained before any changes can be implemented (except to eliminate an immediate hazard to research participants).
- You make changes to the research personnel working on this study (add or drop research staff on this protocol).
- At the end of the study or before you leave The University of Northern Colorado and are no longer a student or employee, to request your protocol be closed. *You cannot continue to reference UNC on any documents (including the informed consent form) or conduct the study under the auspices of UNC if you are no longer a student/employee of this university.
- You have received or have been made aware of any complaints, problems, or adverse events that are related or possibly related to participation in the research.

If you have any questions, please contact the Research Compliance Manager, Nicole Morse, at 970-351-1910 or via e-mail at nicole.morse@unco.edu. Additional information concerning the requirements for the protection of human subjects may be found at the Office of Human Research Protection website - http://hhs.gov/ohrp/ and https://www.unco.edu/research/research-integrity-and-compliance/institutional-review-board/.

Sincerely,

Nicole Morse
Research Compliance Manager

University of Northern Colorado: FWA00000784

APPENDIX B

PATIENT HEALTH QUESTIONNAIRE-4 (PHQ-4)

PATIENT HEALTH QUESTIONNAIRE-4 (PHQ-4)

Over the last 2 weeks, how often have you been bothered by the following problems?

1. Feeling nervous, anxious, or on edge
2. Not being able to stop or control worrying
3. Feeling down, depressed, or hopeless
4. Little interest or pleasure in doing things

Response Options

1. Not at all
2. Several days
3. More than half the days
4. Nearly every day

Kroenke, K., Spitzer, R. L., Williams, J. B., & Löwe, B. (2009). An ultra-brief screening scale for anxiety and depression: the PHQ-4. *Psychosomatics*, *50*(6), 613-621. https://doi.org/10.1176/appi.psy.50.6.613

APPENDIX C

CRISIS SELF-EFFICACY INDEX

CRISIS SELF-EFFICACY INDEX

1. I am certain I have the ability to take necessary action to protect myself during a crisis.
2. I know that I have the ability to do things to protect myself in case of a crisis.
3. What I do with the knowledge I have about a crisis will keep me safe.
4. I can help others decide what actions to take during a crisis.
5. I can anticipate likely events during a crisis.
6. I am able to use resources effectively during a crisis.
7. Given enough time and effort, I believe I can solve most problems during a crisis.
8. When faced with a novel situation, I have confidence that I can handle problems that may arise during a crisis.
9. During a crisis, I can stick to my goals.
10. During a crisis, I can accomplish my goals.
11. I am confident that I can deal efficiently with unexpected crisis situations.
12. Thanks to my resourcefulness, I know how to handle unforeseen situations during a crisis.
13. During a crisis, I can usually handle whatever comes my way.
14. During a crisis, I can achieve most of the goals I have set for myself.

Response Options

1. Strongly Disagree
2. Somewhat Disagree
3. Neither Disagree nor Agree
4. Somewhat Agree
5. Strongly Agree

Park, S., & Avery, E. J. (2019). Development and validation of a crisis self-efficacy index. *Journal of Contingencies and Crisis Management*, *27*(3), 247-256. https://doi.org/10.1111/1468-5973.12257

APPENDIX D

SCHOOL PSYCHOLOGY SERVICES DURING THE CORONAVIRUS-19 PANDEMIC SURVEY

SCHOOL PSYCHOLOGY SERVICES DURING THE CORONAVIRUS-19 PANDEMIC SURVEY

Which professionals did you collaborate with to assist in transitioning to online service delivery?

School principal
School assistant/vice principal
Special education teachers
General Education teachers
District Admin
Others: Please provide job title not personal names

List of resources select if used (Y/N)

When my school first transitioned to online learning, the amount of time I spend consulting with colleagues about students reduced.

During the current (2020-2021) school year, the majority of my school consultation/collaboration services are conducted

Online
In person
Both

Please estimate the percentage of your time you spent in consultation and collaboration services prior to March 2020.

Please estimate the percentage of your time you spent in consultation and collaboration services between March 2020 and May 2020.

Please estimate the percentage of your time you spent in consultation and collaboration services during the 2020-2021 academic year.

I feel my consultation services are more effective when conducted in-person.

I find it easier to come up with useful ideas when consulting and collaborating in person.

Please estimate the percentage of your time you spent in assessment services prior to March 2020.

Please estimate the percentage of your time you spent in assessment services between March 2020 and May 2020.

Please estimate the percentage of your time you spent in assessment services during the 2020-2021 academic year.

I provided in-person assessment services during the 2019-2020 academic year before March 2020. (T/F)

I provided psychoeducational and/or psychodiagnostic assessment services in April, May, or June of 2020.

When my school first transitioned online, the amount of time I spent assessing students reduced.

When my school transitioned online, the amount of time I spend writing assessment reports reduced.

I prefer providing assessment services in-person rather than online.

I feel I am as effective an assessor when assessing online as I do when I am assessing in-person.

I was not able to provide all the assessment services in April, May, and June of 2020 that I normally would have.

During the current (2020-2021) academic school year, I have received more requests for evaluation than in the past few years.

During the current (2020-2021) academic school year, I am spending more time in assessment services than I have in the past few years.

I provided direct and/or indirect intervention services during the 2019-2020 school year before March 2020. (T/F)

Please estimate the percentage of your time you spent in intervention services prior to March 2020.

Please estimate the percentage of your time you spent in intervention services between March 2020 and May 2020.

Please estimate the percentage of your time you spent in intervention services during the 2020-2021 academic year.

When my school transitioned online, the amount of time I spent in direct intervention services reduced.

This current (2020-2021) academic school year I am spending more time in direct behavior intervention than in the past few years.

This current academic school year I am spending more time providing mental health supports than in the past few years.

I prefer providing intervention services in-person than online.
I feel my students were more engaged with in-person services than with online services.

I think my students experience as much benefit with online services as they do with in-person intervention services.

I believe I provide more effective services when providing them in person rather than online.

APPENDIX E

LIST OF STATES THAT PARTICIPANTS REPORTED PRACTICING IN BETWEEN 2019 AND 2021

LIST OF STATES THAT PARTICIPANTS REPORTED PRACTICING IN BETWEEN 2019 AND 2021

State	Number of Participants
Arizona	2
California	13
Colorado	21
Connecticut	5
Florida	2
Georgia	1
Idaho	1
Illinois	7
Indiana	1
Iowa	2
Kansas	35
Kentucky	1
Maryland	2
Massachusetts	2
Minnesota	1
Mississippi	1
Montana	1
Nevada	1
New York	6
North Dakota	1
Ohio	4

Oklahoma	1
Pennsylvania	4
Prefer Not to Answer	1
South Carolina	4
South Dakota	1
Texas	5
Utah	1
Virginia	1
Washington	1
West Virginia	6
Wisconsin	1

APPENDIX F

LIST OF REPORTED TECHNOLOGY RESOURCES USED DURING THE CORONAVIRUS-19 PANDEMIC AND DISTANCE LEARNING

LIST OF REPORTED TECHNOLOGY RESOURCES USED DURING THE CORONAVIRUS-19 PANDEMIC AND DISTANCE LEARNING

- ABC Emotions
- Adobe Sign (2)
- Aeries
- Bitmoji Classroom
- Boom Cards (2)
- Canvas (2)
- CASP
- Chromebooks
- Class Dojo
- Clever
- Collaboration with Colleagues (6)
- Colorado Society for School Psychology
- Curriculum Websites (3)
- Digital Signatures
- District Training / Support (8)
- DocHub (2)
- Docusign
- EasyCBM
- Edgenuity
- Email (2)
- eSchool
- Facebook
- FASP
- Fax Plus
- Flip Grid
- Frontline IEP
- Google Classroom (19)
- Google Documents (2)
- Google Drive (3)
- Google Hangouts
- Google Meet (17)
- Google Slides
- Google Suite (9)
- Google Voice (3)
- HelloSign
- Kami (2)
- KASP (4)
- KSDE (3)
- LincSpring
- MASP
- MHS
- Microsoft Teams (8)
- National Association of School Psychologists (NASP) (15)
- Nearpod
- NYASP (2)
- One to One Mac Books
- Online Scoring Platforms (4)
- Padlet
- Peardeck (2)
- Pearson/QGlobal (5)
- Phone (calling)
- Presence Learning (2)
- PTO
- REMIND
- Research / Journal Articles (2)
- Riverside (2)
- Schoology (3)
- Second Step
- SeeSaw (3)
- Smore
- State Guidelines (4)
- Teachers Pay Teachers (5)
- Test Manuals
- Therapist Aide
- Twitter
- Webinars (3)
    - NASP
    - Riverside
- WeVideo
- YouTube (2)
- Zoom (40)