SUPPORTING RURAL SCHOOL-BASED MENTAL HEALTH SERVICE DELIVERY: EXAMINING THE EFFECT OF PEER COACHING ON THE DELIVERY OF AN EVIDENCE-BASED MENTAL HEALTH INTERVENTION

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DEDICATION

To my husband Ben: You have sat with me and listened to my ideas at the start of this adventure and have supported me with patience and gentleness through the very end. Thank you for being my cheerleader, confidant, and for never letting me stay up late working alone. Thank you for sharing our weekends and spare time during the first ten months of our marriage with this project. I am looking forward to spending more time with you. Nothing in the world makes me more happy than to do life with you. I lovingly place your last name on this document.

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ABSTRACT

Mental Health (MH) needs of school-aged youth is a growing problem (Centers for Disease Control and Prevention, 2019) and youth in rural areas have increased risk for MH needs (Bettenhausen et al., 2021). Schools are uniquely positioned to provide MH services to youth (Hoover & Bostic, 2021) which could be a solution to barriers related to access of MH services in rural areas (Farmer et al., 2021). MH providers in schools fill many roles and have high caseloads which often hinder MH service delivery (Splett et al., 2013). For the MH providers that have the desire and time to deliver MH services, there is often a report of low self-efficacy and a perceived lack of sufficient training to provide MH services (MASP, 2022). When professional development (PD) is provided, it is generally not effective due to a lack of ongoing follow-up support (Nakamura et al., 2014). Peer coaching is a training method that has been used in an academic context and could be a viable method of training and support for MH providers in rural schools (Koschmann et al., 2019). The aim of the current study was to promote evidence-based MH services in rural public schools through peer coaching for MH providers. A randomized control trial (RCT) exploratory study was employed to examine the effectiveness of peer coaching on provider self-efficacy and student well-being as compared to usual practice of only receiving PD training. Fourteen rural school-based MH providers across school psychology, school counseling, and school social work participated while only seven providers engaged in peer coaching. Findings indicated positive effects on MH provider self-efficacy and increased implementation fidelity for the MH intervention. Additionally, positive effects were found for student well-being. Results suggest that peer coaching for rural school MH providers could be an impactful way to provide support to rural school-based MH service delivery.

CHAPTER I

Introduction

Mental health needs among school-aged youth

The fact that many school-aged children suffer from mental health (MH) problems is undisputed. Research shows that the prevalence rate for students experiencing MH issues has increased over time and continues to do so (Herman et al., 2021). In 2010, Merikangas et al. found that, prior to adulthood, close to one in five adolescents in the United States would experience a mental health condition. Specifically, about half of adolescents had onset by age six (anxiety disorders), age 11(behavior disorders), age 13 (mood disorders), and age 15 (substance use disorders) (Merikangas et al.; 2010). School-age students who experience MH challenges are also faced with the daily demands of academic tasks and social-emotional impacts of interacting with peers while also navigating a mental disorder. Data from the Youth Risk Behavior Survey show that approximately 31.5% of high school-age youth in the United States (U.S.) reported experiencing feelings of sadness or hopelessness in 2017, which was an increase from estimates of 28.5% in the year 2007 (Centers for Disease Control and Prevention, 2019). Prior to the COVID-19 pandemic, research indicated that the MH needs of school-age students within the U.S. is on the rise, yet most students do not receive the care they need (National Association of School Psychologists, 2021; Whitney & Peterson, 2019). In fact, prior research has shown that over 70 percent of children who need MH services do not receive it (Torres-Pagán, 2021; van Vulpen et al., 2018). After the initial aftermath of COVID-19, new research indicates that the MH needs of students continue to be at an all-

time high. In a systematic review completed in 2023 by Elharake and colleagues, five child-focused and 16 adolescent-focused studies found that youth reported feeling more anxious, depressed, fatigued, and distressed after the pandemic than before.

Outcomes associated with MH problems for youth who do not receive timely treatment include higher risk for school drop-out, substance use, unemployment, and incarceration (National Alliance of Mental Illness, n.d.). If left untreated, mental illness in youth also can lead to higher risk for suicide which is the second most prevalent cause of death in persons aged 10-18 (Bettenhausen et al., 2021; National Alliance of Mental Illness, n.d.). Combined, these prevalence rates and outcomes may be exacerbated in rural areas. For example, the risk for suicide is higher in adolescents living in rural areas in comparison to those living in urban areas (Bettenhausen et al., 2021; Blackstock et al., 2018).

Mental health services for school-aged youth residing in rural areas

Youth in rural locations are at greater risk for mental health problems due to the unique challenges that rural areas are faced with in accessing MH services (Ratcliffe et el., 2016; Bershad & Blaber, 2011). According to the U.S. Census Bureau, 60 million, or one in five people, live in areas that are described as being rural (United States Census Bureau, n.d.). One of the many challenges faced by rural areas is the lack of resources caused by "geographical isolation" that leads to reduced job opportunities and shortage of MH providers (Pradhan et al., 2018, p. 239; van Vulpen, 2018). Approximately 85 percent of the federally designated MH professional shortage areas are in rural locations which suggests that there is a lack of availability of MH services in rural communities

(Mohatt et al., 2005; President's New Commission on Mental Health, 2004).

When MH services are available in rural areas, there are other barriers to receiving care. In a 2018 literature review, Blackstock et al. identified several factors that impacted MH access for children in rural communities of which *belief* about MH services was a significant barrier. Regarding belief, Blackstock et al. (2018) found that the "close-knit" aspect of rural communities served as a barrier in that parents were concerned about the stigma that would be associated with seeking MH services for their children and the difficulty with maintaining "anonymity" when "everybody knows everybody" in a small community (Boydell et al., 2006 as cited in Blackstock et al., 2018, p. 20). Fear of being perceived as being dangerous, incompetent, or being unfairly treated also contributed to parents being less likely to seek MH services for their children in rural areas because of the negative stigma associated with MH disorders (Blackstock et al., 2018). Blackstock et al. (2018) recognized that normative ideas related to stoicism and self-reliance were contributing factors that prevent the access of MH for adolescents and youth main due to an overarching rural cultural belief that in order to be strong, one must handle MH problems alone (p. 21). Additionally, researchers found that related to belief about MH services was a mistrust of MH providers who are often not from the community and are viewed as outsiders (Bradley et al., 2011). Additionally, the barrier of knowledge about what type of MH services are offered and the utility of such services can contribute to MH services not being sought (van Vulpen et al., 2018). When MH services are sought in rural communities, there are also logistical barriers that exist including high costs associated with MH services and difficulties with transportation to services (van Vulpen et al., 2018). The President's New Freedom Commission on Mental Health (2004)

summarized the barriers to MH services in rural areas as being related to accessibility and acceptability. These were also identified as being some of the main reasons why MH services are often not sought in rural areas until needs are more significant (Bershad & Blaber, 2011).

School-based mental health services

Schools are ideal places for the delivery of MH services due to the fact that students spend the majority of their time at school which increases their accessibility to MH services and the likelihood that attendance for MH services would be higher (Hoover & Bostic, 2021). For the purpose of the current study, MH services are defined as individual clinical intervention in the form of counseling delivered by a school-based MH professional (National Center for Education Statistics, 2022c). School-based MH programs, which are traditionally comprised of both school-employed MH staff and community-based MH practitioners, are becoming increasingly popular as a way to meet the MH needs of youth (Schiele et al., 2014). Since school-based MH services are now encouraged, research has turned to understanding ways to implement evidence-based practices (EBPs) in school environments that often are described as being "chaotic, hectic, and crisis-driven" leading to many barriers for implementation (Weist et al., 2014, p. 468). During the 2019-20 school year, approximately 42 percent of public schools within the US were reported to provide MH services to their students and of those students, 30 percent only received MH services in schools while 62 percent received MH services both at school and outside of school (National Center for Education Statistics, 2022c). Some researchers have turned to the MH providers within the schools to learn

about factors that facilitate MH service delivery, and it was found that the personal desire for delivering MH services along with attitudes toward the utility of EBPs and having sufficient training in MH service delivery were high indicators of MH service delivery in schools (Schiele et al., 2014; Beidas et al., 2012; Langley et al., 2010).

School-based mental health services in rural areas

Rural areas are home to approximately 24 percent of school-aged children in the U.S. and 32.9 percent of U.S. schools (Blackstock et al., 2018). With rural areas already being faced with a shortage in MH providers and beliefs of parents being barriers to MH services provided within the community, schools are uniquely positioned to meet MH needs of school-aged students. Often, schools are the heartbeat of rural communities with parents placing a great amount of trust in schools to provide what is best for their children. When it comes to MH services in rural areas where community providers might not exist, schools are often looked to as the only place where students would receive adequate MH services in a timely manner; however, there are still barriers to the provision of MH services within the school (Farmer et al., 2021; Bain et al., 2011; Lee et al., 2009). The National Center for Education Statistics found that 54% of schools reported "inadequate funding" as being a major limiting factor in terms of providing MH services with rural schools making up 58% of those schools reporting funding as being a major issue (2019). Despite there being a significant funding problem for providing MH in rural schools, there is indication that 40% of rural schools provide individual MH services which is a slight increase from previous years (National Center for Education Statistics, 2022c). In rural areas where there are school-based MH practitioners, the MH

providers usually operate as the sole MH providers with no close contact with other MH professionals, largely having to work independently (Oyen, 2016; Duncan et al., 2014). For example, rural school psychologists in South Dakota have utilized online resources (e.g., email, Skype, webinars) to network and keep in contact with other colleagues for problem-solving and continuing education (Oyen, 2016). Many school MH professionals engage in consultation with other school MH providers in order to share experiences and provide support regarding unique and challenging student situations (Paulson et al., 2015). In rural areas, there may be few opportunities for consultation with other MH providers and, in these cases, MH professionals in rural areas who do not have access to consultation opportunities could experience a low sense of self-efficacy for providing MH services if they are not sure how to handle unique student situations (Paulson et al., 2015). When MH providers experience low self-efficacy for providing MH services, they could be less willing to provide MH services at all (Tang, 2020). In rural areas, this could mean that there are MH providers working in schools who are not providing MH services.

Training and support for school-based mental health providers

Some schools and educational agencies have turned to delivering professional development (PD) as a way to increase knowledge and self-efficacy while also encouraging the use of EBPs that have been heavily researched but not effectively put into practice (Lyons et al., 2022). When PD is provided, there is rarely any follow-up to the PD to see whether or not skills were sustained and integrated to everyday practice which is why some have argued that PD alone is insufficient in increasing continued use

of newly learned skills (Lyons et al., 2022). Peer coaching is a method that has been shown to be effective when used with teachers to implement new academic practices (Joyce & Showers, 2002, 1981). Newer research has indicated peer coaching as a promising practice that can also be utilized in helping MH providers learn and utilize new skills to impact client outcomes while also remaining cost effective (Lyons et al., 2022).

The COVID-19 pandemic has presented many opportunities for access to MH services through alternative formats to traditional face-to-face delivery while also exposing a greater need for MH services to be received within schools (Hopkins & Pedwell, 2021; Schaffer et al., 2021). Telehealth is one identified alternative method to traditional MH service delivery and can be defined as the use of information and communications technology (ICT) to promote and deliver healthcare from a long-distance. Telehealth encompasses all forms of healthcare including mental healthcare (National Center for Telehealth and Technology, n.d.). What once might have been thought of as being less than best practice, telehealth is now viewed as a primary means to provide access to MH services to those who might not otherwise be afforded such an opportunity. In a recent online survey, it was found that while COVID-19 presented many challenges in the delivery of MH services (e.g., reliable technology, internet access), it also shed light on the advantages to telehealth which came in the form of flexibility of service and more family participation in services (Hopkins & Pedwell, 2021). With there being such a large percentage of youth (K-12th grade) enrolled in America's rural schools, it is expected that rural schools will also see an increase in students requiring MH services as a result of COVID-19. Rural schools should anticipate an influx in needs by ensuring that they are adequately staffed with providers who are

equipped to address student MH needs. In the same way that the COVID-19 pandemic opened of the avenue for telehealth to be viewed as a viable option for the delivery of MH services where access was limited or cut off, the use of ITC could also prove helpful in the training and support of school psychologists and other MH providers in the realm of school-based MH service delivery in rural areas where geographical limitations might make access to training and experts costly (Eiraldi et al., 2022).

While some of the previously mentioned systemic barriers to MH service delivery in rural schools cannot be adequately addressed by a single study (e.g., funding and MH provider shortages), the current study seeks to enhance the training of current MH providers by providing a model of ongoing support to school-based MH providers through individual peer-coaching. The current study proposes a sustainable peer coaching model that can be replicated, thus increasing the capacity of school-based MH providers to deliver individual MH services,

particularly rural areas.

Literature Review

Need for School-Based Mental Health Services

Recent research has shown that children and their families are seeking MH services more often at emergency rooms due to not being able to get “timely help” from other sources (Campbell et al., 2020, p. 2; Lo et al., 2020). In a recent retrospective cohort analysis, Bettenhausen et al. (2021) reviewed 2014 data from the Agency for Healthcare Research and Quality's Nationwide Readmissions Database, looking at the

MH hospitalizations of youth aged 0 - 18 and found that, in comparison to non-rural areas, although the length of stay in rural hospitals for MH related difficulties was shorter, the readmission rate was higher. Additionally, Bettenhausen and colleagues (2021) found that the males from poverty backgrounds with externalizing behavior were the highest hospitalized demographic in rural hospitals, accounting for 69.4%.

According to the National Center for Education Statistics, there were 49.5 million Kindergarten – 12th grade students enrolled in U.S public schools at the start of Fall 2021 (2022a). Providing MH services in public schools is a reasonable and logical way to address the issue of youth getting timely access to the MH services they need since schools are the primary place where youths spend their time apart from being in their home (Ali et al., 2019). In fact, schools are usually the first place where MH needs are identified for children and adolescents due to this fact (Kelly, 2020; Lyon & Bruns, 2019; Blackstock et al., 2018). Additionally, schools are the most likely place where MH services are sought on a more consistent basis when compared to MH services in the community and even when MH services are provided, fewer than four sessions are typically provided (NASP, 2021a). Ali and colleagues (2019) analyzed national data collected between the years 2012 and 2015 from the National Survey on Drug Use and health, it was found that out of the youth who reported receiving MH services, 60% reported receiving *some* MH service in schools while 40 percent of youth indicated that schools were they only place where they received MH support. In a 2019 survey conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA), 15 percent of youth aged 12-17 reported receiving MH services at school (National Alliance on Mental Health, n.d.). In 2004 the President's New Freedom

Commission on Mental Health recognized schools as places where the MH needs of children can be addressed while the 2004 Individuals with Disabilities Education Improvement Act (IDEA, 2004) said that schools had an obligation to address MH needs due to the impact MH concerns can have on academics (van Vulpen et al., 2018). Almost a decade later, the passage of Every Student Succeeds Act (ESSA) of 2015 quickened the push for the provision of MH services in schools (National Association of School Psychologists, 2016). When MH services are delivered in schools by either personnel employed by the school or community, this can be referred to as a sc*hool-based mental health (SBMH)* program/service (Capps et al., 2021; Doll et al., 2017). DiGirolamo et al. (2021) found that the existence of a SBMH program positively impacted school climate and argued that SBMH programs are a way to address the public health crisis that is youth MH needs by providing increased access to MH services and early intervention. Although it is not disputed that the benefits of SBMH programs are numerous, it is recognized that advocacy for such programs starts with policy makers (Franke et al., 2020). Even further than policy, Herman et al., (2021) assert that SBMH should be a public health approach that is integrated within community-school partnerships to support children and families with cohesive MH services. A public health approach to SBMH services includes implementing the tiered model of prevention (primary= universal support, secondary= targeted support, tertiary= intensive support) on a "broader and more systemic" level than what has been traditionally utilized in the past with each individual school district operating in isolation rather than in partnership with the community (Herman et al., 2020, p. 8; Splett et al., 2013). SBMH programs should not take the place of community-based MH services but, rather, can service as places where MH needs are

initially addressed and monitored while reducing barriers relating to logistics such as transportation and scheduling (Hoover & Bostic, 2021).

In a national survey of school personnel conducted by Lee et al. (2009), researchers found that schools are often viewed as the de facto mental health system for students; however, in rural areas, the MH needs of students often go unmet or are underserved (p. 29). A reason for this could be related to lack of funding, staff retention, and having trained MH providers (Lee et al., 2009). The average public-school student within the United States spends approximately six to seven hours at school under the care of teachers, counselors, administrators, nurses, and school psychologists (National Center for Education Statistics, Schools and Staffing Survey (SASS), n.d.). Providing MH services to students within the school setting can eliminate many identified access barriers including not having transportation to a community provider, parents not having the time to take students to a community provider after school, and a community provider not being available or over a 45-minute drive away for rural areas (Pradhan et al., 2019; Blackstock et al., 2018; Le et al., 2009). By providing MH services within schools, there is a higher likelihood that students will receive MH services sooner and on a more consistent basis (National Alliance on Mental Health, n.d.). Additionally, progress in MH services can be monitored more easily across several contexts than in a community-based MH setting alone (Ali et al., 2019).

School-based mental health providers

There are a variety of MH providers found within schools. According to the National Center for Education Statistics, 94 percent of schools had at least one MH

provider (e.g., psychologist, counselor, or social worker) during the 2015-2016 school year (2019). Of the 95 percent, most school-based MH providers were counselors (80-82%) with school psychologists falling between 67 and 66 percent and school social workers being the least prevalent (46 to 37%; National Center for Education Statistics, 2019). Many school-based MH professionals have specialized training in providing MH services; however, their roles vary by state and profession The following serves as an overview of common school-based MH providers.

School Psychologists. While school psychologists are recognized as MH providers, they are not often utilized in such capacities in rural areas where staffing is limited and emphasis is often placed on academic needs and meeting legal requirements set forth by federal laws and regulations (e.g., special education assessments and eligibility timelines). The National Association of School Psychologists (NASP) recommends that schools maintain a student to school psychologist ratio of 1:500; however, the current average ratio of school psychologist to student ratio is 1:1,162 (National Association of School Psychologists, n.d.). In a survey conducted by Eklund et al. (2020), it was found that higher ratios of students to school psychologists resulted in less time spent on the delivery of MH services. As a solution to the shortage of school psychologists, Schmidtz et al., (2021) proposed a "grow your own" school psychology training initiative that would recruit from education professionals already living in rural areas for "re-specialization" as school psychologists (p. 4). Not only are school psychologists important in the successful adoption and implementation of a SBMH program, but researchers argue that teachers and other school personnel that have been "traditionally underutilized" are now "regarded as important mental health resources"

also (Moon et al., 2017, p. 385). Re-specialization programs are one way to uniquely address school psychologist shortages in rural areas, but they do not fully address the MH training component which is where the proposed research could fill in the gap.

Research supports the fact that early prevention and intervention is key for intervening and, in some cases, altering the "negative trajectory" that some students face when experiencing MH disorders in their childhood (Splett et al., 2013). While research presents the gold standard of what should be done when it comes to helping meet the needs of children, there are often barriers to helping that are a result of greater systems at play. Splett et al. (2013) identified barriers to "best practices" that included limited time, training limitations, engagement with school personnel, and district/systems issues. Many school psychology training programs are placing more emphasis on providing improved MH training, however, Suldo et al. (2010) found that some practicing school psychologists felt a lack of confidence and having minimal exposure to MH issues for students which ultimately leads to school psychologists feeling "underprepared and overwhelmed" when faced with being one of the only MH providers in rural school districts and communities (Splett et al., 2013, p. 250).

School Counselors. According to the American Counseling Association (2011), school counselors are certified mental health providers whose services are mandated in 29 states. Recent data indicates that the number has increased to 30 states (American School Counselor Association, 2022a). School counselors focus on the well-being of all students in schools by often implementing comprehensive school counseling programs as well as assisting with post-secondary planning. The recommended ratio for school counselors to students is 1:250; however, the most recent data collected by the National

Center for Education Statistics from 2019-2020 reported the national average ratio of school counselor to students being at 1:421 (American School Counselor Association, 2022b). Similar to that of school psychologists in schools, school counselors are often limited in the number of services that they can provide students due to large caseloads and miscellaneous school-based job duties that are often unrelated to the delivery of MH services like monitoring halls, creating schedules, and assisting with state-wide testing (Carlson & Kees, 2013). School counselors are the largest group of school-based MH providers with there being approximately 118,000 school counselors working in the United States which makes them perfect candidates for the delivery of MH services where school psychologists may not be able, especially in rural areas where there may be more school counselors than school psychologists present (Barshay, 2020). Additionally, Carlson & Kees (2013) found that while school counselors are trained in the delivery of MH services, they are not confident when it comes to intervening in cases where students may have significant MH problems related to a MH diagnosis.

School Social Workers. Like school psychologists and school counselors, school social workers are licensed or certified MH professionals who work within schools to promote overall student social and emotional well-being (Kelly, 2020). School social workers have at minimum, a master's degree in social work and receive intensive training in MH service delivery and ecological systems consultation (Kelly, 2020; Thompson et al., 2019; National Association of Social Workers, 2012). School social workers are uniquely positioned in schools not only to impact the lives of students in the schools but also their families by providing a link between both the school and community regarding resources and services to promote social and emotional wellbeing (School Social Work

Association of America. n.d.). The National Association of Social Workers recommend a school social worker to student ratio of 1 to 250 from the (2012). The National Center on Education Statistics analyzed data collected in the 2015-2016 school year and found that there was a 1 to 690-760 ratio of school social workers to students (2019). In total, there are around 142,633 school social workers currently working in the United States (Zippia, 2022). According to the School Social Worker Association of America, school social workers are recognized as being able to provide evidence-based MH services in schools, but due to vaguely defined roles and certification requirements for school social workers, providing direct MH services is also not a regular occurrence (Mitchell et al., 2021).

Evidence-based practices for mental health services

When it comes to implementing MH interventions, evidence-based practices (EBPs) are promoted and supported in the literature as being the gold standard for promoting positive student outcomes (Meadowcroft et al., 2018). This push for employing research-based methods in the schools and everyday teaching methods stems from legislation such as the No Child Left Behind Act of 2001 (NCLB) and Every Student Succeeds Act of 2016 (ESSA) which each have specific criteria for rigorous research designs and "random assignment experiments" (Farley-Ripple et al., 2018, p. 235). For practitioners working in the field, the research on EBPs is often not easy to interpret so the creation of databases such as "What Works Clearinghouse" make decisions about which EBPs to use more consumable (IES, 2017 as cited in Farley-Ripple et al., 2018). Many EBPs have been developed for use in schools by a plethora of research studies, many of which are funded through large organizations such as the U.S

Department of Education and the Institute of Education Sciences (IES; Farley-Ripple et al., 2018). Despite federal legislation mandates indicating the use of EPBs, vast research support creating EBPs, and there being multiple databases available providing names of specific EBP to use, there is growing research that indicates EBPs are often not used with fidelity or are not used at all (Forman et al., 2013). This phenomenon of there being a disconnect between the creation of EBPs and the use of EBPs is commonly referred to as the "research-to-practice gap" (Lyon et al., 2011; Reinke et al., 2011b). There is also evidence that shows that despite their effectiveness, EBPs for MH interventions are underutilized in schools and community-based treatment settings creating a gap between research and practice (Nakamura et al., 2014; Lyon et al., 2011; Reinke et al., 2011b). To that end, one group of researchers found success when they adapted an evidence-based intervention (EBI) that was used within a clinic setting to a school setting and compared the results of the adapted EBI to "usual care" that was implemented by schools (Cho et al., 2021, p. 54). Results showed significant results for effectiveness according to both MH providers and students that received the SMF intervention (Cho et al., 2021). Meaningful collaboration can take place between researchers and school personnel in school settings to ensure that EBIs are "feasible, relevant, and impactful" in school settings which would then ensure their consistent use (Holmes et al., 2021, p. 49). Some reasons that EBPs are not as widely used could come down to provider training and knowledge of EBPs, as well as, competing demands in schools (Forman et al., 2013). In a 2011 review conducted of interdisciplinary literature, Lyon et al. found that MH providers are not often given the proper support and training to implement EBPs in real-world contexts outside of a research study. Research shows that the type of training that

is provided about new interventions is a determinant to whether the new intervention is implemented with success (Reinke et al., 2011b). As a result, much research has placed emphasis on developing training methods to assist MH providers with implementing EBPs (Sanetti et al., 2019; Lyon et al., 2011).

Even though MH providers have reported not feeling adequately trained or supported in delivering MH services (Farmer et al., 2021; MASP, 2022), there is little research on how professional development, training, and supervision of school-based MH providers impacts self-efficacy for providing MH services (Schiele et al., 2014). In their randomized control trial, Schiele and colleagues (2014) provided quality training to one group of school-based MH providers while only providing supervision and peer support to another group of school-based MH providers. Results of their study showed that there was not a statistically significant difference in the self-efficacy of the MH providers who received the quality training or supervision and peer support; however, a secondary finding showed that higher clinician self-efficacy was an overall predictor of providing evidence-based MH services (Schiele et al., 2014). One tangible way to address the barriers of MH services delivery in schools is to work with current school-based MH services providers to increase their capacity to provide MH services by further training to build skills and self-efficacy.

Rural schools: challenge for mental health services and evidence-based practices

The National Center for Education Statistics (2022) uses four types of geographical reporting locales that are taken from the U.S. Census Bureau: city, suburban, town, and rural. The main distinguishing factors between the locales are their

population size and proximity to other locales. Out of the four types of locales, rural areas are the most remote and distant with lower population density (National Center for Education Statistics, 2022). The National Center for Education Statistics (NCES) reported 57 percent of all school districts in the United States as being in rural areas in 2010-2011 which equaled to approximately 12 million or 24 percent total enrollment of all students within the United States (2021). More recent data from 2018-2019 indicate that one out of every five students within the U.S. are enrolled in a rural school with there being more students attending rural schools than the combined enrollment of the 85 largest U.S. school districts (Showalter et al., 2019). Even though rural schools comprise much of the U.S student population, rural schools are often invisible to policy-makers since most rural enrollment ranges from only 15 to 25% of the total student enrollment in many states with the median enrollment for U.S rural school districts being only 494 students (Showalter et al., 2019). Being invisible to law and policy makers often translates into less allocated funding which can impact rural school districts when it comes to resources for hiring highly qualified staff. For example, instructional spending for each student in rural schools within the state of Mississippi is close to $2,000 less than the National average spending and Mississippi has 50% of its schools located in places that are considered to be rural. In Kansas, salaries of teachers in rural districts is over $15,000 below the national average salary in 2019 with Kansas having 45% of its schools located in rural locations (Showalter et al., 2019). With a high percentage of students and low access to resources and support from related policies, there is a need for building capacity of school-based professionals to provide MH services within rural schools. Specifically, Trawyer and colleagues (2019) found that research on EBPs have

also largely excluded rural schools from testing the effectiveness of EBPs and adapting EBPs to match the needs of rural areas. In their exploratory systematic review of EBPs that were specifically tested on a rural sample, fewer than five percent (8 of 183) published articles within the year 2017 were specifically tested and designed for rural populations (Trawyer et al., 2019).

In rural areas, school counselors or other school-based MH providers are usually the only certified or credentialed MH provider in the entire community which present many problems, including the issue of not having access to supervision or other support to enhance and maintain clinical skills (Duncan et al., 2014). Previous research on challenges faced by rural MH providers has indicated that geographical isolation as well as diminished opportunities for professional interaction with other MH providers make quality supervision and consultation related activities extremely difficult for rural MH providers (Duncan et al., 2014; McMahon & Simons, 2004). In a survey of school counselors in rural areas (N=118), 65% indicated that they would prefer another school counselor as a person who would provide supervision and support (Duncan et al., 2014). Even more-so, when supervision was provided it was only once a month and 88% of respondents indicated that they would not be given release time from their typical school duties to receive supervision (Duncan et al., 2014).

Barriers to school-based mental health service delivery

There are several barriers that exist related to the implementation of EBPs for MH services in school settings that are contextual or related to the school environment itself (Smith et al., 2022). Balancing school schedules to fit within the parameters of MH

interventions has been cited as being one barrier to MH service delivery in schools that has caused MH providers to adapt evidence-based MH interventions to meet the time constraints which may also lead to important aspects of the intervention being left out or not implemented with fidelity. The literature is limited in applying clinical MH interventions to school environments; however, Cho and colleagues (2021) have begun to focus on examining the effectiveness of a brief MH intervention that could be an answer to the time constraint barrier. Another frequently mentioned barrier to MH service delivery in schools relates to the overall perceptions of MH and the role of who should be providing the service. In a 2018, van Vulpen et al. adapted a survey designed by Reinke et al. (2011b) that identified lack of parental support and a lack of parental awareness about the existence of MH problem in youth being the top parental perceptual barriers that existed in relation to the implementation of MH services in schools. In their survey of teacher perceptions related to MH services in schools, Reinke et al. (2011b) found that teachers perceive MH services as being a great need in schools but also that there is not enough adequate training to address such needs. Additionally, the 2011 survey indicated that teachers recognized school psychologists as being the primary providers of MH services in schools (Reinke et al., 2011b). With the perception that the MH needs of students are great and there are MH professionals that are viewed as being capable of meeting the need, barriers related to provider characteristics create barriers to youth receiving the needed quality MH services in schools.

Supporting school-based mental health service implementation

Self-Efficacy for implementation. Self-efficacy can be defined as being a belief

about one's ability to perform a given task or to manage situations (Bandura, 1997, 1986). Additionally, self-efficacy is said to have influence on the goals that one sets and the effort that one puts forth to reach those goals (Lockwood et al., 2018, 2017; Huber, 2006; Bodenhorn & Skaggs, 2005; Bandura, 1997, 1986). Given this information, self-efficacy is a key component of successful MH service delivery as there is a clear relationship between self-efficacy and positive outcomes for both providers and those receiving the MH services (Huber, 2006; Bodenhorn & Skaggs, 2005; Bandura, 1997, 1986). Mullen & Lambie (2016) looked at the self-efficacy of school counselors and found that the self-efficacy scores impacted the frequency of MH services that were provided. When given appropriate and sufficient training, self-efficacy can increase for tasks (Mullen & Lambie, 2016; Bandura, 1997). In a national survey of school psychologists conducted in 2020, 64 % of respondents indicated they engage in individual counseling with an average caseload of 10.9 students across the school year (Farmer et al.). While this is encouraging, the total percent of school psychologists engaged with individual counseling in 2020 decreased from 72% in 2015 (McNamara et al., 2019). When asked about their perceived competency to provide individual MH services, 88% of school psychologists who took the survey indicated that they were *moderately* to *very* capable (Farmer et al., 2021). The 2020 survey revealed a trend related to whether a school psychologist felt they could deliver individual MH services and how often they provided those services. In fact, it was noted that the highest percentage of MH service delivery fell among school psychologists who rated themselves as being *moderately* to *very* capable (Farmer et al., 2021). Furthermore, the national survey responses suggested that school psychologists perform a variety of activities but the larger the caseload (higher

student to school psychologist ratio), the less likely those services included MH delivery (Farmer et al., 2021). This information indicates that school psychologists' self-efficacy for delivering MH services is diminished the less time they spend engaging in such services due to spending time engaging in other roles. One of the personal factors that is often left out of EBP literature when it comes to the provision of MH practices within schools is the self-efficacy of MH providers (Schiele et al., 2010). While we know that school-based MH providers operate with high caseloads and report spending less time delivering MH services than they desire, little is known about the effect that the self-efficacy of MH providers to provide MH services impacts the actual delivery of such services (Farmer et al., 2021; Suldo et al., 2010). Schiele and colleagues conducted a study that examined whether providing quality training for school-based MH providers or peer support and supervision influenced the provider self-efficacy for three specific aspects of MH service delivery which included: 1) quality of practice, 2) knowledge of evidence-based practices, and 3) use of evidence-based practices (2014). It was found that the quality training and the peer support and supervision produced similar gains in self-efficacy means and the self-efficacy scores were a significant predictor for the three aspects of MH service delivery (Schiele et al., 2014).

While MH providers are trained in graduate programs, there are requirements for supervised activities related to providing MH services; however, after graduation the requirements for supervision are state-dependent and is not included in continuing education requirements to maintain school-based licensure (Tang, 2020). Specifically for school counselors, Tang (2020) found that the literature provided many examples of school counselors largely receiving "administrative supervision" from principles and

other school administration who did not have a MH background or training. When supervision was received from someone with a MH background, Tang (2020) found that it usually occurred in a group format (e.g., group of district school counselors) rather than individually. When school counselors do not receive appropriate supervision, they are not able to further their skills past their graduate training unless they seek out conferences and other continuing education hours that usually take place in a passive on-demand format. Not having access to quality training in evidence-based MH interventions and the continued support to implement such interventions leads to unsustainability for SBMH programs (Smith et al., 2021). If MH skills are not used and the necessary supports are not provided, then there is a greater likelihood that the self-efficacy of MH providers to implement such services decreases (Smith et al., 2021).

Mental Health Provider Training. In a recent survey conducted by the Missouri Association of School Psychologists (MASP) and presented to the MASP Board in August 2022 by the MASP Membership Chair, questions related to MH service delivery revealed that there are school psychologists ready to provide MH services, but many do not feel confident in their ability nor do they have the opportunity to collaborate with others related to their MH service delivery (e.g., supervision, consultation) (MASP, 2022). Additionally, when asked about their willingness to deliver MH services, respondents to the MASP survey largely indicated that they do not know how to balance delivering MH services with their current responsibilities (MASP, 2022). When asked to identify barriers that are in the way of being able to deliver MH services, respondents to the MASP survey overwhelmingly indicated more professional development (training) would be needed and that the current infrastructure of their schools hindered MH service

implementation (MASP, 2021). In an analysis of surveys conducted by the National Association of School Psychologists (NASP), Suldo et al. (2010) found that while the majority of school psychologists have a desire to engage with MH interventions, only less than 25% actually are able to. Suldo and colleagues (2010) identified inadequate or deficient training as a barrier to MH service delivery which contributed to limited knowledge of and self-efficacy for providing MH services. The need for more training in MH service delivery for current school-based MH providers is an overlooked topic and one that is not clearly addressed in the current literature.

Commonly used training models in schools

Two core aspects of training that must be included in any training program or framework to make the acquisition and implementation of skills successful include: 1) a way for trainees to learn new skills and 2) ongoing feedback for refinement and continued development of the learned skills (Lyon et al., 2011; Joyce & Showers, 2002). There are established training methods that can be used to equip a workforce that is already existing for effective MH service delivery that is evidence based (Smith et al., 2021; Lyon et al., 2011). This review will cover common types of training found within schools and will suggest one for use within rural schools for MH professionals.

Professional Development. Professional development (PD), or "single-exposure training" is commonly used in schools and other disciplines as a means to train a large group of people on new skills or methods in a timely manner (Lyon et al., 2010; Joyce & Showers, 2002). When introducing new material, schools often default to teaching methods that require passive learning which include didactic presentations and seminars

that tend to only be useful in impacting the knowledge and attitudes of providers but not necessarily impacting their practice (Nakamura et al., 2014). While PD often does lead to increased knowledge, it often requires stagnate passive participation from learners and does not result in a change in behavior that is consistent or sustainable (Lyon et al., 2010). One of the reasons why PD has been found to be ineffective is the fact that it does not allow for the unique training needs of the participant to be met as there is no relationship formed with the person delivering the PD and the person receiving the training (Johnson et al., 2016). Another barrier with PD is the cost involved when it is provided by outside experts. One study reviewed PD training that was received over a period of time in fulfillment for using published EBPs and it was indicated that the average costs of a 10-month implementation training experience for a community MH agency was around $89,575 or $11,659 per MH provider when it was provided by publishers of EBPs or outside experts of the EBPs (Walker & Baird, 2019). Having such costly training opportunities that do not produce consistent behavior change has made MH providers shy away from engaging with and using EBPs with fidelity (Pas et al., 2020; Walker & Baird, 2019). Additionally, PD only addresses one of the important aspects of a training framework and falls short on providing follow-up and ongoing feedback (Meyer et al., 2022; Lyon et al., 2011; Joyce & Showers, 2002; 1981).

Coaching. An individualized alternative to training through PD that has been gaining momentum in recent decades is coaching. Coaching is a "cycle" of ongoing feedback that usually takes place between an expert or someone knowledgeable in an area and someone who is in developing skills in the area (Joyce & Showers, 1981). One popular coaching model is referred to as "train the trainer" (TtT) and deals with having a

"master trainer" teach an EBP intervention to supervisors who then would go and train their practitioners (Nakaurma et al,, 2014, p. 11). The TtT model allows for a reduction in the time and resources it would take to train a large group by training only one or two people who would then go out and train others. Having the ability to allow for supervisors from schools and communities learn how to train their own staff members in EBPs could be an answer to a barrier to service delivery produced by lack of personnel and supervision resources; however, the TtT approach may not be particularly beneficial in rural areas where there may not be any "master trainers" available. Similarly, Meyer and colleagues (2022) sought to create an adapted TtT model in Michigan for MH providers in schools by developing a "network" of community MH providers who were trained to provide support to school-based MH providers in an effort to increase the use of evidence-based MH practices in schools. Meyer et al. (2022) found that it was difficult to recruit trainers or coaches from rural areas for face-to-face training and identified the need for virtual coaching in underserved rural locations as an area of future research.

In the academic world, coaching is utilized as a way to follow-up from professional development in an ongoing manner without having to rely on outside experts. This type of coaching is referred to as peer coaching.

Peer Coaching. Peer coaching been used in the field of education as a way to train teachers to implement EBPs when it comes to teaching reading, writing, or another academic discipline (Showers & Joyce, 1996; Joyce & Showers, 2002, 1981). Peer coaching is often used in conjunction with professional development; however, there are unique aspects of peer coaching which has deemed it more effective than professional development alone due to its nature of accountability and constructive individualized

feedback, guidance, and modeling of skills (Showers & Joyce, 1996). Specifically, one idea behind peer coaching that makes it unique and more effective than other training methods is the "ongoing" or "continued" contact that is afforded as a result of peer coaching (Lyon et al., 2011, p. 240). In literature, consistent change is said to be achieved through approximately 20-25 attempts at implementation of the new skill (Joyce & Showers, 2002). When learning and practicing a new skill, it is important to be non-evaluative and assist the learner with thinking through aspects of implementation that is working and aspects that could use improvement. A hallmark of peer coaching is the fact that it is non-evaluative in nature and provides feedback in a constructive manner to improve outcomes (Lyon et al., 2011). Other key aspects of coaching include providing opportunity for modeling or role-play of the new skill(s) being taught, observations of the skill in action with subsequent feedback, and reflection on what is going well and areas of improvement (Ashworth et al., 2018).

One example of positive effects of peer coaching on teacher-student interactions was found by Johnson and colleagues (2017) who utilized teachers as peer coaches for helping other teachers increase positive teacher-student interaction. Teachers (n=12) engaged with peer coaching across six sessions and results, when compared to 12 control teachers, found that peer coaching increased the teacher's capacity to strengthen teacher-student interactions. Recently, McMaster et al. (2020) found that peer coaching was effective in increasing the knowledge and skills of teachers to deliver quality writing instruction which resulted in an increase in student achievement. Peer coaching largely exists within academic contexts (teacher to teacher) and has seen success when increasing teaching skills that produce positive student outcomes. Researchers in the realm of MH

have questioned how to find new ways to effectively train and support MH providers in the delivery of EBPs to which peer coaching could be an effective answer (Koschmann et al., 2019; Lyon et al., 2010).

Peer Coaching as an effective and feasible mental health training mechanism

When it comes to peer coaching within the context of MH service delivery, the literature is limited. One study (Rosenberg et al., 2022) described training paraprofessionals (or someone who is not trained as a MH provider) to be coaches for clients as a way to address the barriers to MH service delivery in rural areas. In this method, coaching is directed at client outcomes and not focused on the development or training of the coach (MH provide) themselves. For MH service delivery to be effective, research has shown that merely providing training via workshops or detailed manuals that outline key elements of the MH treatment alone is ineffective and, rather, the workshop trainings should be followed by "practice-focused coaching" delivered over the course of several months (Walker & Baird, 2019).

Peer coaching is shown to be effective in assisting with the acquisition of knowledge/skills while also creating space for the sustained implementation of the learned skills which translates to there being an overall benefit to clients (Lyon et al., 2011; Joyce & Showers, 2002; Showers & Joyce, 1996). Important elements of peer coaching that make it an effective and feasible training component for MH providers is observation paired with individualized feedback, elements that are not always included in other training methods (Walker & Baird, 2019). Ultimately, engaging with peer coaching for evidence-based MH treatments is feasible as many EBPs in MH share elements or

principles that are based on over-arching theories (e.g., Cognitive Behavioral Therapy) that can be generalized to meet the needs for a wide range of clients as long as the peer coaching provides a way for MH providers to first practice the newly learned skills and receive constructive feedback (Walker & Baird, 2019).

One example of peer coaching as a training and supervision framework can be found in the Triple P Positive Parenting Program (Sanders, 1999) that calls for practitioners to form support groups that provide support while the program is taking place with families along with providing feedback for providers in an online coaching format (Lyon et al., 2011). More recently, Lyons and colleagues (2022) conducted a study exploring the effects of an online "group-based telementoring" model to promote mental health services in schools where all participants had access to online learning training modules and treatment participants also had access to monthly virtual mentoring (telementoring) (p.1). Results from the study indicated that participating in the telementoring produced higher engagement with the online learning modules and overall satisfaction with training; however, no information was reported about how telementoring impacted the provider's delivery of MH services in the schools. Another example of a remote peer coaching training method is currently being proposed as a pilot study by Eiraldi and colleagues and is focused on rural schools who already implement positive behavior intervention supports (PBIS) (2022). Eiraldi et al.'s pilot study was designed so that some MH providers went through training on an evidence-based MH intervention that would supplement the school-wide efforts while another group of providers also went through the video training but received peer coaching as a supplement to the training (2022). As part of their peer coaching process, Eiraldi and

colleagues proposed to use goal setting, self-reflection, and performance feedback as part of their coaching process for MH providers (2022). Additionally, motivational interviewing strategies will be used by asking MH providers to reflect on their previous session ("*What do you think went right? What do you think did not go well?"*) with a focus being on implementation fidelity (Eiraldi et al., 2022).

Research shows that school-based mental health providers, specifically school psychologists practicing in rural settings, are fulfilling many roles which do not allow them much time to practice or use their skills relating to the provision of MH services (Schmidtz et al., 2021; Habeger et al., 2019). When these skills are not used, school-based MH providers may lose confidence in their skills to deliver MH services (Suldo et al., 2010). It is assumed of most school-based MH providers that there is a desire to provide MH services, but there is also a need for further training (Splett et al., 2013; Suldo et al. 2010). Similar to the recent research evaluating the effectiveness of "telementoring" (Lyons et al., 2022), a virtual individual peer coaching model could benefit the rural school MH service provider while also addressing barriers to MH service delivery in rural schools such as closing the research to practice gap for implementing MH EBPs and providing support while taking into account geographical barriers through technological platforms (Lyons et al., 2022; Walker & Baird, 2019). Peer coaching could be a model that is sustainable as school-based MH providers form a network across rural areas to support each other through individual MH interventions similar to previous research with peer coaching components (Lyons et al., 2022; Eiraldi et al., 2022; Meyer et al., 2022; Sanders, 1999).

Summary

MH needs of school-aged youth is a growing problem (Centers for Disease Control and Prevention, 2019; Herman et al., 2010) and youth in rural areas have increased risk (Bettenhausen et al., 2021; Blackstock et al., 2018). Schools have a unique position to provide MH services to youth while they are at school (Hoover & Bostic, 2021; Schiele et al., 2014). This provision of MH services in schools can be an answer to barriers related to access of services in rural areas (Farmer et al., 2021; Bain et al., 2011; Lee et al., 2009). Research has produced much information regarding EBPs for MH services; however, research also shows that EBPs aren't consistently used which contributes to a gap between the research and practice of said research (Lyons et al., 2022; Walker & Baird, 2019). Some of the reasons that EBPs are not being used within schools comes down to the training of MH professionals in schools (Smith et al., 2021). MH providers in schools are called on to fill many roles in the school setting and have high caseloads due to lack of funding and provider shortage (Splett et al., 2013; Suldo et al., 2010). For the MH providers that have the desire and time to deliver MH services, often there is a report of low self-efficacy simply because their skills have not been used, they lack sufficient training, and/or they feel that the MH needs of their students are too great (MASP, 2022; Farmer et al., 2021; Mullen & Lambie, 2016; Bandura, 1997). When training is provided, it is generally not effective due to not happening over a prolonged period of time and not giving any follow-up or support (Nakamura et al., 2014; Lyon et al., 2011). Peer coaching is a training method that has been used in the context of academic teaching support for teachers in schools (McMaster et al., 2020; Johnson et al., 2017). Peer coaching could be a viable method of training and support for MH providers

in schools (Koschmann et al., 2019). The aim of the current study is to promote the practice of evidence-based MH services in rural public schools through supporting MH providers (e.g., school psychologists, school counselors, social workers, licensed professional counselors, and any other MH provider practicing within a school) and provide positive outcomes for rural students with MH needs. Providing peer coaching along with training on a MH intervention would specifically address barriers to MH service delivery in rural schools such as access to training which could increase MH provider self-efficacy and ultimately promote student well-being.

Statement of Purpose

The purpose of the current study is to examine the effectiveness of peer coaching for school-based MH professionals during implementation of an evidence-based mental health intervention in regard to provider self-efficacy of implementation and student-wellbeing while controlling for provider fidelity of implementation. The aim of the current study seeks to examine the impact of providing peer coaching in addition to professional development (PD) training for school-based MH providers during their implementation of an individual MH intervention compared to only providing one-time PD training on the same intervention. The purpose of the peer coaching model is to increase provider self-efficacy and implementation fidelity of a MH intervention, to ultimately increase student outcomes.

As a result of the current study, it is hypothesized that the self-efficacy of rural school MH providers will be increased which would pave the way for sustainable school MH practices. Additionally, it is hoped that a model for MH consultation (i.e., peer

coaching) outlined in the current study could be replicated by other practitioners in rural areas as a means of promoting MH service delivery in underserved areas.

Research Questions

In order to support the provision of MH services in rural schools while also addressing the previously outlined barriers to providing MH services in rural schools, the current study seeks to answer the following research questions:

1. What is the effect of peer coaching of an evidence-based school mental health intervention on implementor ***self-efficacy,*** controlling for implementation fidelity?
2. What is the effect of peer coaching of an evidence-based school mental health intervention on ***student well-being,*** controlling for implementation fidelity?
3. Does the perceived quality of the ***coaching alliance*** impact the peer coaching process and outcomes?

Given the previously stated research that demonstrates the positive effects of providing coaching to teachers while they implement academic interventions, it is hypothesized that positive effects will be seen for school MH providers who receive training *and* peer-coaching (treatment group) when compared to the control group who initially only receives training without peer coaching. It is hypothesized that providing peer coaching would have positive effects on provider self-efficacy. When school MH providers have high self-efficacy and MH interventions are delivered with fidelity, it is hypothesized that the MH intervention would produce positive effects on student well-being.

CHAPTER II

Methods

This chapter provides an overview of the current study's research design and analysis procedures. Peer coaching as the study's intervention (independent variable) will be discussed along with measures used to collect data on the study's dependent variables. All data was collected in compliance with the University of Missouri Institutional Review Board and with written consent from all participants.

Research Overview

Restatement of Research Questions

The current study investigated the effect of peer-coaching on outcomes related to school-based MH provider self-efficacy and student overall well-being, controlling for fidelity of implementation and effects of the coaching relationship between the peer coach and MH provider on outcomes. The following research questions were examined:

1. What is the effect of peer coaching of an evidence-based school mental health intervention on implementor ***self-efficacy,*** controlling for implementation fidelity?
2. What is the effect of peer coaching of an evidence-based school mental health intervention on ***student well-being,*** controlling for implementation fidelity?
3. Does the perceived quality of the ***coaching alliance*** impact the peer coaching process and outcomes?

Research Methodology

A randomized control trial (RCT) was used to evaluate the current study's primary research questions. Each of the previously stated research questions represents a dependent variable while the independent variable for the current study was the intervention of peer coaching. The RCT design was chosen for the current study as it is the "gold standard" in exploring the effects of interventions, RTCs are robust against internal threats to validity such as selection bias, maturation, and history (Sheck & Zhu, 2018; Ginsburg & Smith, 2016; Choueiry, n.d.). In research involving MH interventions and human subjects, it is often difficult to use true randomized experimental designs due to the ethical considerations of withholding or delaying treatment (Rose & Bowen, 2019). Without a control group, a pretest-posttest research design may be considered less valid. It is important to note that the current study did not withhold treatment for students who received MH services from the control MH providers since those providers were trained on the MH intervention and were able to perform "treatment as usual" during the initial data collection period.

Participants & Settings

School-based mental health providers

During pretest data collection for the current study, demographic information was collected from all MH provider participants. This information was collected via Qualtrics and included information relating to the following areas: gender, age, ethnicity, highest degree completed, type of degree focus (e.g., school psychology, counseling, social work), certifications held (if any), number of years working in current position, zip code

of school where participants primarily work, and grades of students that the participants generally work with. The Demographic Questionnaire can be viewed in Appendix A.

The current study recruited participants who identified as being MH providers working within rural school settings with adolescents aged 7 through 17 years old. This specific age group of adolescents was chosen based on the age parameters of the Show Me FIRST MH intervention used by all MH providers across the treatment and control groups in the current study. Inclusion criteria for the current study for MH providers were that they have a master's degree (at minimum) in a mental health field and possess a license or certificate which designated them as being credentialed to deliver MH services. In total, 14 MH participants participated in the current study. All 14 participants identified as White and 93% of participants identified as female. The average age of the MH participants fell within the range of 36-40 with the reported ages spanning from 20 to 60 years. (Table 1).

Table 1

MH participant demographics: Race, Gender, and Age

Racial Identity	Number
White	*n*=14
Gender Identity	
Female	n=13
Male	n=1
Age Range	
20-25	*n*=2
26-30	*n*=1
31-35	*n*=4
36-40	*n*=1
41-45	*n*=1
46-50	*n*=2
51-55	*n*=2
56-60	*n*=1

61-61	*none*

Note: For age, one participant did not provide a response. The information above reflects responses from 13 participants.

School-based MH professionals recruited for the current study were school psychologists, school counselors, and school social workers working within rural school settings (Table 2). Of the participants, 6 were school counselors, 6 were school psychologists, one school social worker and one PhD school psychology graduate student.

Table 2

School-based Mental Health Provider Type

Provider Type	Percentage
School counselor	43%
School psychologist	43%
School social worker	7%
School psychology grad student	7%
	Total= 14

In addition to possessing a school-based MH certification that allowed them to practice within the school setting, nine out of 14 MH participants had additional credentials such as a teaching certificate or a professional license.

Additional inclusion criteria for recruited MH professionals were that they 1) self-identify as being trained on the implementation of MH interventions, 2) have a desire to deliver MH services in schools, 3) did not regularly engage in structured MH services, and 4) did not feel confident in their delivery of MH services. For the current study, MH services was defined as individual counseling utilizing a manualized Cognitive Behavioral Therapy (CBT) intervention. Given this fact, inclusion criteria for the current

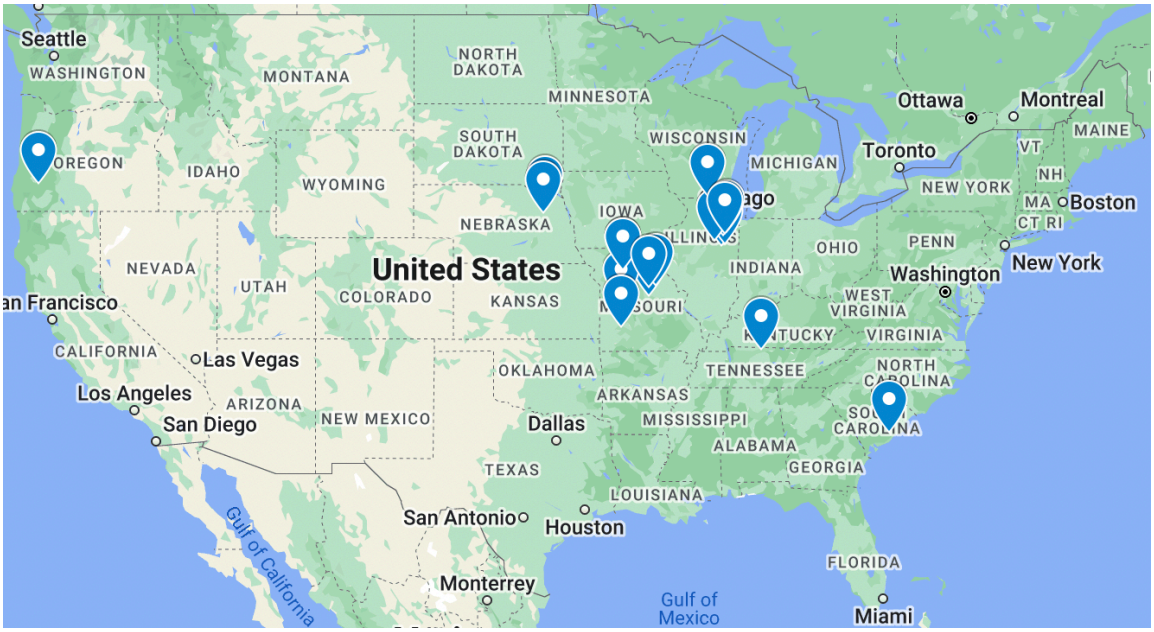
study also included that the MH providers must be willing to use the Show Me FIRST manualized CBT MH intervention with one individual student (Cho et al., 2021).

Exclusion criteria for recruited participants was that they 1) did not already regularly engage in individual MH services using manualized CBT methods, 2) did not regularly use the Show Me FIRST MH intervention, or 3) reported having no desire to engage in MH service delivery in schools.

The school settings where MH professionals were recruited from were defined as rural by the National Center for Education Statistics (2022) and the United States Census Bureau (USCB) based on the school's zip code where the MH provider worked. In the current study, there were MH providers working from six zip code locations in Illinois, six zip codes in Missouri, two zip codes in Nebraska, one zip code in Tennessee, one zip code in Wisconsin, one zip code in Oregon, and one zip code in South Carolina (Figure 1).

Figure 1

Map of the U.S. with identified zip code locations where MH participants worked



The reported MH provider per student ratio ranged from as little as 1:100 to as much as 1:2400 with eight MH providers reporting ratios under 1:440 and the average ratio being 1:633. Two MH providers were not able to provide a ratio estimate.

MH providers indicated providing services in 1 to 19 different school buildings as a part of their work. Six MH providers reported working in only one school building and three MH providers indicated working in three different school buildings and three other providers indicated working in five different buildings. One MH provider indicated responsibility for four schools while another MH provider indicated responsibility for 19 schools.

MH provider responses ranged from 0 years to 24 years of experience with the average years worked being 7.78. Ten MH providers reported working for 10 years or less while four MH providers reported working for 14 years or more.

MH providers reported spending zero to 1,000 minutes (about 16 and a half hours) per week providing individual counseling to students, with an average of 409 minutes (about 7 hours) per week.

Student participants

The current study's peer coaching intervention focused on the MH provider participants; however, each MH provider engaged in individual counseling with a student. The selection criteria for the students were that they were between the ages of 7 – 17 and parent/guardian consent was obtained. The average student age was 11.14 years with the oldest being 16 and the youngest being 7 years old. Student grade level ranged from 1st to 11th grade with every grade level represented except 10th and 12th. Sixty-four

percent of participants were male while 36% were female. Seventy-nine participants identified as White. Seven percent of participants identified as African American, 7% as Hispanic, and 7% as Biracial. Of the 14 student participants, 43% were identified as receiving special education services through eligibility categories of Other Health Impairment (n = 3), Emotional Disturbance (n = 1), Specific Learning Disability (n = 1), and Language Impairment (n = 1). One student participant was identified as Gifted, and one was identified as having a 504 Plan for an ADHD diagnosis. Six student participants (43%) were characterized as General Education students.

Design & Procedures

Experimental Design

After the pretest survey baseline data was gathered and training on the *Show Me FIRST* intervention was complete, participants were assigned to either a treatment or control group to meet requirements of the pretest-posttest randomized control trial design of the current study. Each participant from the treatment group implemented *Show Me FIRST* with one student while receiving peer coaching sessions. The control group participants also implemented the *Show Me FIRST* intervention with one student, but they did not receive any additional peer coaching from the researcher. As previously mentioned, peer coaching was offered to the control participants after the data collection phase of the proposed study was complete as a waitlist control group design; however, none of the control group participants were interested in receiving the intervention when presented with the option. The independent variable for the current study is the peer coaching sessions which was delivered to the treatment group only while the control

group performed counseling under “practice as usual.”

Virtual Peer Coaching

Prior to the COVID-19 Pandemic, there were few programs that introduced the idea of providing MH services in an online format. Bice-Urbach & Kratochwill (2016) suggested that Telehealth could be utilized in rural school systems to address the barrier of having limited access to trained MH professionals. In their study, Bice-Urbach & Kratochwill (2016) found that there were positive outcomes for both student disruptive behavior and teacher perceptions of the telehealth process. More recently, Lyons et al. (2022) utilized an online format to train school-based MH providers to which there was a positive response and high engagement. For the current study, the peer coaching sessions were delivered virtually via Zoom teleconferencing software to include MH participants from various rural areas that would not otherwise be geographically feasible to include.

Procedures

Recruitment

School-based MH provider participants were recruited through various methods that included: advertisements on national and local listservs and social media. Emails were sent to state agencies in Missouri and Nebraska representing school psychology, school counseling, and school social work as well as agencies representing rural education in the states of Missouri and Montana. Word of mouth was also used utilizing contacts of the principal investigator in the state of Georgia and Illinois as well as colleagues at a national conference. Recruitment efforts focused specifically in areas that

were considered rural in order to recruit participants who would meet the study's inclusion criteria. Recruited participants were offered free training and materials as benefits for participation. No monetary compensation was provided. Recruitment efforts lasted five weeks.

Qualifying Participants

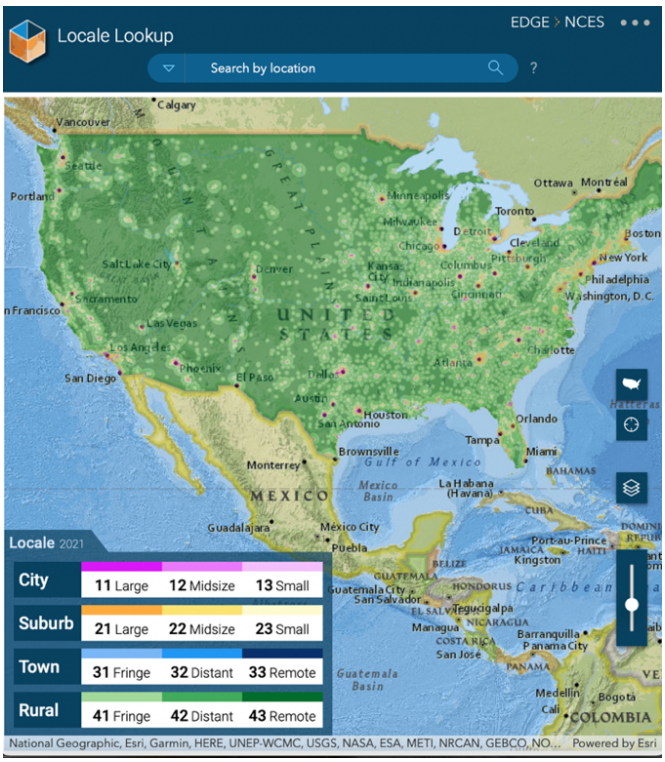
Interested participants completed a brief Microsoft Form which collected their name, preferred method of contact, and either email address or phone number which was sent to the investigator upon completion (see Appendix B). This interest form link was provided in recruitment emails and included on the recruitment flyer. In total, there were 30 entries on the interest form. There were four other interested participants that did not complete the Interest Form and were contacted by the investigator directly. These participants found out about the study via word of mouth and their names and contact information were given to the investigator. Once the investigator received an entry on the Microsoft form, the interested participant was contacted with a recruitment email script (see Appendix C) which re-stated information about the study that was in the recruitment email and recruitment flyer and provided the interested participant with a link to a pre-qualifying questionnaire to complete.

The pre-qualifying survey received 34 entries which were used to determine participant eligibility in the study by asking questions about the previously mentioned inclusion criteria (see Appendix D). Each completed survey was reviewed by the investigator to determine whether inclusion criteria for the study were met. Specifically, the interested participant's zip code where they worked was checked to determine if the

area matched the rural definition used by the current study. This was done using the Locale Lookup tool on the National Center for Education Statistics' website (Figure 2). The investigator typed in the zip code provided by each interested participant into the Locale Lookup tool and if a zip code showed up with a *Rural* or *Town* designation, then the interested participant met inclusion criteria for working in a rural location for the purposes of the current study.

Figure 2

Landing Page for the Locale Lookup by the NCES.



Note. Zip codes were typed in the "search by location box." *Link:* *https://nces.ed.gov/programs/maped/LocaleLookup/*

All of the 34 interested participants that took pre-qualifying survey were found to meet inclusion criteria. Eligible participants were contacted by the investigator via email to request a zoom meeting so that further information about the study could be shared (see Appendix E for the follow-up email sent to participants requesting a zoom meeting).

During the zoom meeting, the study conditions were explained (treatment and control) and the logistics surrounding the participation of a student was discussed. If an interested participant agreed to participate in the study, then the investigator emailed the study consent forms (MH Provider, Parent Consent, Student Assent) to the MH provider and instructed the MH provider to work toward securing a student to work with for the study. For the MH provider to participate in the current study, they were required to obtain a signed parental consent form for the student prior to the start of the intervention. Consent forms were emailed to the investigator prior to the start of the study.

Sample Size

In a systematic review of 78 randomized control studies that took place between 2013 and 2017, Schuster et al. (2021) found that the median sample size was $N = 106$ for in-person intervention and $N = 181$ for interventions that took place online. When estimating the sample size needed for research studies, a Power Analysis can easily be conducted using the free software called G*Power (Erdfelder et al., 1996; Kang, 2021). When estimating sample sizes, the effect size of the study must also be considered. The effect size can be described as the "strength of the relationship" between the independent and dependent variables and is represented by Cohen's *f* at the following values for a small (f=0.10), medium (f= 0.25), or large (f=0.40) effect (Chen & Chen, 2010). In social and psychological literature, the reported effect sizes are usually between small (f=0.10) and medium (f=0.25). Funder & Ozer (2019) reviewed studies that reanalyzed previous, well-established psychological studies and it was found that the average effect size was 0.21 based on two studies which surveyed social and personality psychological literature

(Richard et al., 2003 and Fraley & Marks, 2007 as cited in Funder & Ozer). When surveying the Peer Coaching literature, it was found that effect sizes ranged from medium (*f*=0.25) to large (*f*=0.40; Ennis et al., 2020; Ashworth et al., 2018; Johnson et al., 2017; Lyon et al., 2011). For the current study, a power analysis was conducted using the G*Power 3.1 program in order to estimate the number of participants needed to adequately answer the study's research questions (Erdfelder et al., 1996; Kang, 2021). Based on previous Peer Coaching literature, a medium effect (*f*=0.25) was used in the G*power 3.1 program which indicated that a sample size of 28 total participants across the treatment and control group would be required. For an estimated small effect (*f*=0.10), the necessary sample size needed for the study to have enough power would be 74 total participants. For the current study, significant efforts were made to recruit as many participants as possible. While there were 34 interested participants initially, only 16 of those participants signed consent to participate which, while it is less than the proposed number of 28 to achieve medium effect, the investigator felt as though the contribution of the current study to the rural school-based mental health literature would be significant as an exploratory study. After the start of the study, two participants dropped out (after signing consent and completing the initial professional development training) which resulted in a final sample size of 14 MH provider participants. It should be noted that the sample size for the proposed study is a known limitation and will be discussed later in this manuscript.

Training

After participants were identified for participation in the current study and they

returned signed consent forms to participate, the investigator provided a live Professional Development (PD) webinar that reviewed the manualized MH intervention that was used for the current study along with the study procedures. Training took place prior to randomly assigning participants into the treatment or control groups. In total, the training lasted for approximately two hours and was led by the researcher in a synchronous virtual format to accommodate for the geographic locations of participants being spread apart and to allow for all participants to receive the training without the hinderance of travel costs. The training was offered on two occasions, one in the morning and one in the afternoon. Despite having two different opportunities to attend the virtual training, there were two MH providers that could not attend the training and needed an alternate time. Thus, the investigator recorded a separate training via Zoom and sent the link for the MH providers to watch. This link was tracked so that the investigator could tell whether the training was accessed and for how long it was accessed. Before the training, participants were emailed a packet of materials to review (electronic) containing the MH intervention manual and student worksheets that went along with each session.

Show Me FIRST Intervention

The Show Me FIRST (SMF; Cho et al. 2020) MH intervention used by all participants in the current study. SMF is a brief, manualized intervention for treatment of emotional problems (anxiety, depression, and anger) in youths aged 7 – 17. SMF utilizes five core cognitive-behavioral-therapy (CBT) strategies that have been shown to be effective when working with youth which are: affective education, problem-solving, relaxation techniques, disputing cognitive distortions, and changing patterns of behavior.

The SMF intervention was specifically chosen for the current study due to the fact that it is brief (can be completed in six sessions), transdiagnostic (can be used for a wide variety of presenting concerns), and is modeled after research-backed youth MH interventions such as MATCH-ADTC and Principle-Guided Psychotherapy for Children and Adolescents (Chorpita & Weisz, 2009; Weisz et al., 2017; Cho et al., 2020; Weisz & Bearman, 2020). The SMF intervention is free to use and can easily be implemented into daily practice. SMF has been shown to be effective when delivered in schools because it is not difficult to learn how to use and is flexible in delivery which means that as long as the key components are covered in each session, the MH provider can adapt their approach to meet the needs of the youth receiving the service (Cho et al., 2021).

Show Me FIRST Intervention Implementer Training

The SMF virtual PD training covered the following topics: 1) a brief explanation of who would benefit from receiving SMF as an individual MH intervention, 2) the five SMF principles for treatment, 3) the "toolbox approach" to therapy with SMF, 4) a general session outline that will be used for each intervention session, 5) an overview of internalizing problems youths may experience (e.g., depression, anxiety, anger), and 6) each of the six sessions in the SMF manual and examples and directions of how to implement the session with youth.

SMF Training Effectiveness

To gauge the effectiveness of the PD SMF training that was given to all participants at the beginning of the study, each MH provider was asked to complete a

Qualtrics training effectiveness survey at the conclusion of the training. The training effectiveness survey asked respondents to answer questions relating to satisfaction, effectiveness, usefulness, and comfort level with content presented in the training. The answers were provided on a 5-point Likert scale ranging from NA- *not applicable,* (1) *Not at all*, (2) *Slightly*, (3) *Somewhat*, (4) *Moderately*, and (5) *Extremely*. The survey allowed for anonymous completion, thus, there was no clear way to track who had completed the survey and who had not completed the survey. In total, the survey received nine responses which means that there were five participants who did not rate the effectiveness of the training. Overall, the average overall effectiveness rating was 4.59 out of 5. The training effectiveness questionnaire can be viewed in Appendix F.

Data collection training

At the end of the SMF virtual PD training, study specific information was reviewed since all participants, regardless of treatment or control group, were asked to collect the same data over the course of the intervention time period. The data collection training included information on how to access the self-efficacy pre-test and how to administer the study well-being pre-test to students. For the two MH providers who reviewed the training via recording, the investigator followed-up via email to relay study specific information. For organization purposes and ease of access, a Study Checklist sheet (see Appendix G) was provided to all MH participants which contained links to each piece of data that was required along with a timeline for when the data was to be collected.

Peer coaches were also trained in how to collect fidelity of implementation data

after each intervention session using a Qualtrics self-rating form. Also, peer coaches were trained in how to use teleconferencing software (e.g., Zoom) to record each peer coaching session to establish interobserver reliability of implementation fidelity between the MH provider and a trained observer. Independent observation by a trained observer were conducted for 50% of all SMF sessions.

Study procedure training

After all participants received training on the SMF intervention, a brief overview of the study timeline was discussed with all participants. The difference between the treatment and control group was also explained, and it was emphasized that the control group was a waitlist design where MH participants would have access to the intervention (peer coaching) later. As previously mentioned, the waitlist intervention ultimately did not take place; however, at the time of initial data collection, it was planned that the waitlist control intervention would occur. Participants were made aware that the incentive they would receive for participating in the study was the free PD training on the MH intervention and free access to the MH intervention that they could keep and, if they so desired, implement into their everyday practice after the study was complete. After the PD training, which included training on the study timeline and procedures, MH providers were randomly assigned into a treatment or control group (Table 3).

Table 3

School-based mental health provider type by condition

Control Condition	Number
School counselor	n=6
School psychologist	n=1
Treatment Condition	

School counselor	n=1
School psychologist	n=4
School social worker	n=1
School psychologist graduate student	n=1

Note. Each condition had 7 participants for a total n = 14.

Independent Variable

Peer Coaching Intervention

The peer coaching sessions delivered to the treatment group served as the intervention for the current study, or the part of the study being manipulated to produce effects. The peer coaching process was designed after a research-based teacher consultation model, the Classroom Check-Up (CCU), clinical interviewing techniques such as Motivational Interviewing (MI), and also incorporated key common pieces of peer coaching identified in the literature including: modeling and practice of skills, supervision, goal setting, self-reflection, ongoing assessment, and ongoing feedback (Owens, 2016; Reinke et al., 2011a; Jarvis et al., 2007; Miller & Rollnick, 2002; Showers & Joyce, 1996; Joyce & Showers, 1981). Each peer coaching session lasted for an average of 20 minutes with some lasting as little as 9 minutes and others lasting as long as 35 minutes. The peer coaching sessions touched on aspects of the SMF intervention with which the MH provider might be having difficulty, need clarification, or ideas for implementation. The peer coaching sessions were also geared toward addressing barriers that the MH provider might be facing (e.g., system-wide, time constraints, high caseload, etc.) along with utilizing MI techniques to address participant self-efficacy for delivering the intervention. Specific MI techniques that were used during the peer coaching sessions included OARS (open-ended questions, affirmations, reflective listening, summarizing), eliciting change talk through asking questions, and infusing change

(importance/confidence) rulers at the end of each session (Reinke et al, 2011a). While the waitlist control group were not offered peer coaching during the data collection phase of the proposed study, the waitlist participants were offered peer coaching sessions after the current study's data collection period ended with all the same conditions that the treatment group received. The waitlist control group intervention was offered to start in Fall 2023 due to school year ending toward the end of April 2023 and there not being enough time to get a full eight-weeks of intervention in. Out of the seven MH participants who were in the control group, four expressed interest in receiving the peer coaching intervention in the Fall 2023. The four MH participants who expressed interest for peer coaching were contacted in August 2023 via email and only two MH providers responded to the email. One MH participant said they were not able to receive peer coaching due to a change in their role and not having time to do individual counseling. The other MH participant indicated they would be able to engage in peer coaching starting in September 2023. The investigator followed-up with the MH participant in September 2023 but did not hear back from them. Thus, peer coaching for the waitlist control group did not occur in the current study.

Peer coaches

Peer coaching sessions were delivered by trained peer coaches who had previous training on and experience with delivering the SMF intervention. In total, two peer coaches participated in the current study, including the investigator and one more. Recruited peer coaches were school psychology PhD graduate students. The current study's peer coaches also had experience working within the schools but did not

specifically work in the schools where the MH providers worked. Each peer coach received training on the core components of peer coaching and using the peer coaching protocol as it relates to the current study. Additional training on study procedures and data collection timeline were also provided.

Dependent Variables

Self-Efficacy Measures

Questions from the *Counseling Skills* subscale of the *Huber Inventory of Self-Efficacy for School Psychologists – Research Version* (HIS-SP-RV; Huber, 2006*)* and questions from the *Counselor Activity Self-Efficacy Scales* (CASES; Lent et al., 2003) were combined and utilized for both the pre & posttests. Additionally, a single question regarding MH provider self-confidence of providing individual counseling on a scale of 1 ("no confidence at all") to 10 ("extreme confidence") was asked to all MH providers at pretest and posttest. It is important to note that while the HIS-SP-RV and CASES measures demonstrate reliable psychometric properties separately, the psychometric properties of using them together has not been studied.

The original HIS-SP-RV was a 74-item inventory that was created to measure the self-efficacy of school psychologists in five domains: intervention and consultation skills; multidimensional assessment skills; counseling skills; professional interpersonal skills; and research skills (Huber, 2006). According to Huber (2006), the HIS-SP-RV was created from a sample of 297 school psychologists and school psychology graduate students through multivariate correlational methods and a causal-comparative research design. In 2017, Lockwood et al. analyzed the psychometric properties of the HIS-SP-RV

by collecting data from 520 respondents and found that the factor structure of the 74-item inventory did not have a good fit. Lockwood et al. (2017) paired down the original HIS-SP-RV to a 35-item scale, eliminating the items that did not fit within the factor structure, which made it more feasible to use in research. Lockwood and colleagues (2017) conducted statistical analysis of the HIS-SP-RV and found that the coefficient alphas of each of the five domains ranged from 0.90 – 0.96. Lockwood et al. (2017) went even further in their research and discovered dissertation studies (*N*=5) that utilized the full HIS-SP-RV also obtained overall coefficient alphas of 0.97. Specifically, the coefficient alpha for the *Counseling skills* domain was 0.92. Questions on the HIS-SP-RV are presented on a 7-point Likert Scale ranging from 1 (*Not Well At All*) to 7 (*Very Well).* The *Counseling Skills* subscale has seven questions relating to self-efficacy of counseling skills delivery. Sample questions include: *How well can you use effective counseling skills?* and *How well can you counsel individual children?* The HIS-SP-SV *Counseling Skills* subscale was chosen for the current study because it was specifically designed to measure the self-efficacy of school psychologists in relation to delivering counseling skills which is an area of research that is currently limited in the literature (Lockwood et al., 2017). See Appendix H for the *Counseling Skills* subscale of the HIS-SP-RV in its entirety.

The CASES was developed to add to the literature on the measurement of self-efficacy for counselors and mental health providers with an instrument based on counseling theories and helping skills (Lent et al., 2003, p. 97). The CASES measures self-efficacy across three domains: 1) helping skill self-efficacy, 2) session management self-efficacy, and 3) counseling challenges self-efficacy. All questions are rated on a 10-

point Likert scale from 0 (*No Confidence*) to 9 (*Complete Confidence*). The current study will utilize questions from the first two domains of the CASES. The Helping Skill Self-Efficacy domain contains 15 questions relating to skills of insight, exploration, and action. The directions for this domain ask respondents to "*indicate how confident you are in your ability to use each of the following helping skills effectively, over the next week, in counseling most clients."* Example questions from the Helping Skill Self-Efficacy domain are as follows: "*Interpretations (make statements that go beyond what the client has overtly stated and give the clint a new way of seeing his or her behavior, thoughts, or feelings," Open questions (ask questions that help clients to clarify or explore their thoughts or feelings," and "Role-play and behavior rehearsal (assist the client to role-play or rehearse behaviors in session."* The Session Management Self-Efficacy domain contains 10 questions that relate to the perceived ability to manage counseling sessions tasks while utilizing basic helping skills (Lent et al., 2003). The directions for this domain ask respondents to "*indicate how confident you are in your ability to do each of the following tasks effectively.*" Example questions from the Session Management Self-Efficacy domain are as follows: "*Help your client to set realistic counseling goals," "Keep sessions on track and focused," and "Know what to do or say next after your client talks."* See Appendix I for the CASES Helping Skill Self-Efficacy and Session Management domains in their entirety.

Lent and colleagues (2003) conducted exploratory factor analysis on each of the CASES domains utilizing principle-axis factoring and oblimin oblique rotation. CASES items that loaded above 0.50 were retained. For the Helping Skill Self-Efficacy domain, a three-factor structure was found which described 60 percent of the total variance and

resulted in the following sub-domains: a) insight skills (six items), exploration skills (five items), and action skills (four items). A single factor structure was found for the Session Management Self-Efficacy domain which resulted in 10 items which accounted for 66 percent of the total variance. For the last domain (Counseling Challenges Self-Efficacy), a two -actor structure was revealed which resulted in 67 percent of total variance. The Counseling Challenges Self-Efficacy domain was not used for the current study. In terms of internal reliability, Lent et al. (2003) reported high estimates ranging from .79 to .94 for each of the sub-domains within the CASES. Reliability estimates of the sub-domains relevant to the current study are as follows: Insight= .85, Exploration= .79, Action= .83, and Session Management= .94. Test-retest correlations for the CASES domains and sub-domains used for this study were reported to be stable: Insight Skills= .75, Exploration Skills= .71, Action Skills= .59, Session Management= .76.

Student Well-Being Measures

To address the current study's second research question regarding the effect peer coaching would have on student well-being, the Youth Self-Report version of the *Symptoms and Functioning Severity Scale* (SFSS), which is part of the *Peabody Treatment Progress Battery* (PTPB), was given as pre-posttest measures to each student that received the SMF individual intervention (Bickman et al., 2010). The SFSS was chosen due to the fact that it is a general measure of emotional and behavioral problems (e.g., thoughts, behaviors, and feelings) and can be used to measure change over time by providing an overall level of a youth's symptoms and functioning (Bickman et al., 2010). The SFSS is comparable to other measures, specifically the Child Behavior Checklist

(CBCL), and also can be administered in approximately five to seven minutes due to only having 33 items (Achenbach, 1991 as cited in Bickman et al., 2010). The Youth Self-Report version of the SFSS allows respondents to provide answers on a 5-point Likert scale with the following options: *Never, Hardly Ever, Sometimes, Often,* and *Very Often.* The SFSS provides a total score, an internalizing subscale score, and an externalizing subscale score. The SFSS is a reliable measure with the Cronbach's Alpha for the SFSS-Youth (self-report) version being at 0.93 and internal consistency reliability coefficients being 0.88 (internalizing) and 0.91 (externalizing) for the two subscales (Bickman et al., 2010). The full Youth Self-Report form of the SFSS can be viewed in Appendix J.

Coaching Alliance Measures

The *Measure of Coach and Teacher Alliance—Coach Report* (Bradshaw et al., 2009b; Appendix K) and the *Measure of Coach and Teacher Alliance—Teacher Report* (Bradshaw et al., 2009a; Appendix K). The *Measure of Coach and Teacher Alliance – Teacher/Coach Report* were originally published for use with another intervention (The Double Check) that involved teachers (Johnson et al., 2016), thus the wording on the scale was changed from "teacher" to "MH provider" and specific mention of the "Show Me FIRST" intervention was added in place of "Double Check" for the purposes of the current study. The coaching alliance scales present questions on a 5-point Likert scale ranging from *Never* to *Always.* There are four areas of the coaching relationship that are assessed with the scale which include: the working relationship, competent implementation of the coaching process, MH provider investment in the process, and the benefits of coaching. The Teacher Report version contains 30-items that touch on the four areas of coaching while the Coach Report version contains 12 more items that touch on

perceived barriers to the coaching process (Johnson et al., 2016). In the study completed by Johnson et al. (2016), the Cronbach's alphas were as follows for the Teacher Report (MH provider report) 0.84 for relationship, 0.89 for benefits, 0.94 for process, and 0.87 for investment. On the report completed by the coach, the Cronbach's alphas were as follows: 0.88 for relationship, 0.84 for process, 0.89 for investment, 0.92 for benefits, and 0.67 for barriers to coaching.

Terms in these measures were modified from "teacher" and "teaching" to reflect MH providers implementing individual counseling. The MH provider version contained 28-items and the peer coach version contained 30-items that were arranged into four domains: 1) Working relationship, 2) Coaching process, 3) Investment, and 4) Perceived benefit. These measures were designed to complement each other and provide insight into both the MH provider and peer coach perception on the coaching relationship. Items were rated on a 5-point Likert scale ranging from Never (1) to Always (5).

Implementation Fidelity Measures

Show Me FIRST Fidelity

For the current study, MH providers in the treatment and control group were asked to complete the modified version of the *Cognitive Behavioral Therapy Adherence Measure* (CBTAM) after delivering a SMF session via Qualtrics. Peer coaches for each MH provider in the treatment group addressed the CBTAM ratings during peer coaching sessions and asked MH providers to rate their adherence to fidelity on a scale of 1 to 7. The control group MH providers were asked to complete the CBTAM via two emails from the investigator at week two and then week 6 of the study.

Measures. To measure the MH provider's implementation fidelity of the SMF intervention, a modified version of the *Cognitive Behavioral Therapy Adherence Measure* (CBTAM) was used (Cho, 2021; Hawley, 2013). The CBTAM was created for MH providers to assess their own degree of adherence to core CBT principles in therapy to address the top three mental health problems youth face (e.g., anxiety, depression, disruptive behavior) so that the same fidelity measure could be used across multiple evidence-based MH interventions (Cho et al., 2021). Specifically, the CBTAM was created by Hawley who worked on adapting the SMF intervention that is used in the current study from the FIRST intervention, thus there are seven items from the CBTAM that directly align with SMF components (Cho et al, 2021; Weisz & Bearman, 2020; Hawley, 2013). The CBTAM provides a practical and feasible way for MH practitioners to use one fidelity measure that would cover aspects of treatments for multiple MH needs (e.g., anxiety, depression, behavior problems) at the same time versus only having one fidelity measure that covered single MH problems and thus, only addressing key session components that were directly related to a single MH intervention (Cho, 2021; Hawley, 2013). The CBTAM was designed to accompany transdiagnostic MH interventions that use principal CBT treatment techniques to look at several MH problem characteristics at the same time (Cho, 2021). In a dissertation studying the development of the CBTAM, Cho (2021) found that there were 20 key components for anxiety, 22 key components for depression, and 18 key components for behavior addressed on the CBTAM. After going through content validity testing, Cho paired down the CBTAM to 18 total items (2021). The CBTAM can be completed by the MH therapist, parent, and youth receiving treatment and allows respondents to rate how much a specific component was included in

the particular MH intervention session on a 7-point Likert scale from 1 ("not at all") to 7 ("a lot"). For the current study, the CBTAM was modified from 18 questions to 12 questions that were specifically related to the common evidence-based practices that are used in SMF, including items related to setting an agenda, going over and assigning new homework, providing psychoeducation, reinforcing the youth, planning for the future, role-playing, identifying feelings, relaxation, and cognitive coping. The CBTAM was used as the treatment fidelity adherence measures in a recent study that utilized the SMF intervention (Cho et al., 2021) and is also currently used at the Center for Evidence Based Youth Mental Health (CEBYMH) that is jointly ran by Dr. Kristin Hawley, the creator of the CBTAM. Cho (2021) indicated that there is "preliminary support" for the CBTAM (therapist report) in relation to convergent and discriminant validity when the CBTAM was compared to other adherence measures (p. 33). The modified CBTAM form can be viewed in Appendix L.

Peer Coaching Fidelity

A Peer Coaching Protocol was created by the current study's investigator (Appendix M) and was used for each peer coaching session that took place as an effort to streamline the coaching process and to allow for the key elements of peer coaching to be addressed during each peer coaching session. The use of the peer coaching protocol for each session was also to control for any differences in coaching among the peer coaches and increase coaching fidelity. Specifically, the peer coaching protocol was designed to ensure that each session would first establish rapport between the coach and MH provider. Next, the peer coach would prompt the MH provider to reflect on the previous SMF session (e.g., *What went well? What to improve? Ideas to think about?).* During the

reflection portion of the coaching session, the peer coach would provide feedback on the previous session (by commenting on the CBTAM fidelity self-rating) and reflecting on the session with the MH provider. Next, the peer coach would guide the MH provider in goal setting for the next SMF session (e.g., strategies to use, actions to take, and confidence/importance rulers for meeting the goal). After goal setting, the peer coach would model and practice the upcoming SMF skills with the MH provider and inquire about the MH provider's comfort level the upcoming SMF session topic. Finally, next steps and accountability would be discussed, and specific study related tasks would be reviewed for both the peer coach and MH provider (e.g., CBTAM fidelity ratings, uploading session recordings).

Measures. Fidelity of the peer coaching sessions was measured using a fidelity checklist that covers components included on the peer coaching protocol. All coaching sessions were recorded and peer coaches completed a fidelity form after each coaching session.

Interrater Fidelity Observations

To determine the degree to which the peer-coaching sessions adhered to specific aspects of peer coaching identified in the literature, the 2nd, 4th, and 6th peer coaching sessions for each MH provider were recorded and observed by trained independent observers. Peer coaching sessions were rated on a 5-point Likert scale based on level of alignment to the peer coaching protocol ranging from (1) *very poor,* (2) *poor,* (3) *acceptable,* (4) *good,* and (5) *very good.* The Peer coaching Fidelity Protocol can be viewed in Appendix N Approximately 50 percent of all peer coaching session recordings

were rated for fidelity. Interrater reliability was captured for 30 percent of the fidelity observation fidelity ratings to ensure accurate coding.

Intervention Timeline

The treatment and control groups began SMF intervention sessions at the beginning of March 2023. Since there are six main sessions of SMF, then there were a minimum of six peer coaching sessions conducted with each MH participant in the treatment group. It was the expectation that there would be one peer coaching session per number of SMF sessions delivered by the MH provider. Deciding how much time to spend on each SMF concept is a topic discussed during the peer coaching sessions. The goal was for MH providers to complete the SMF intervention in eight weeks or less. Out of all 14 MH providers, there was an average of 7.57 SMF session delivered with a minimum of 5 and a maximum of 9. Ten MH providers completed the SMF intervention in eight total sessions. Two MH providers completed the SMF intervention in five sessions while one MH provider complete SMF in seven sessions and one completed SMF in five sessions.

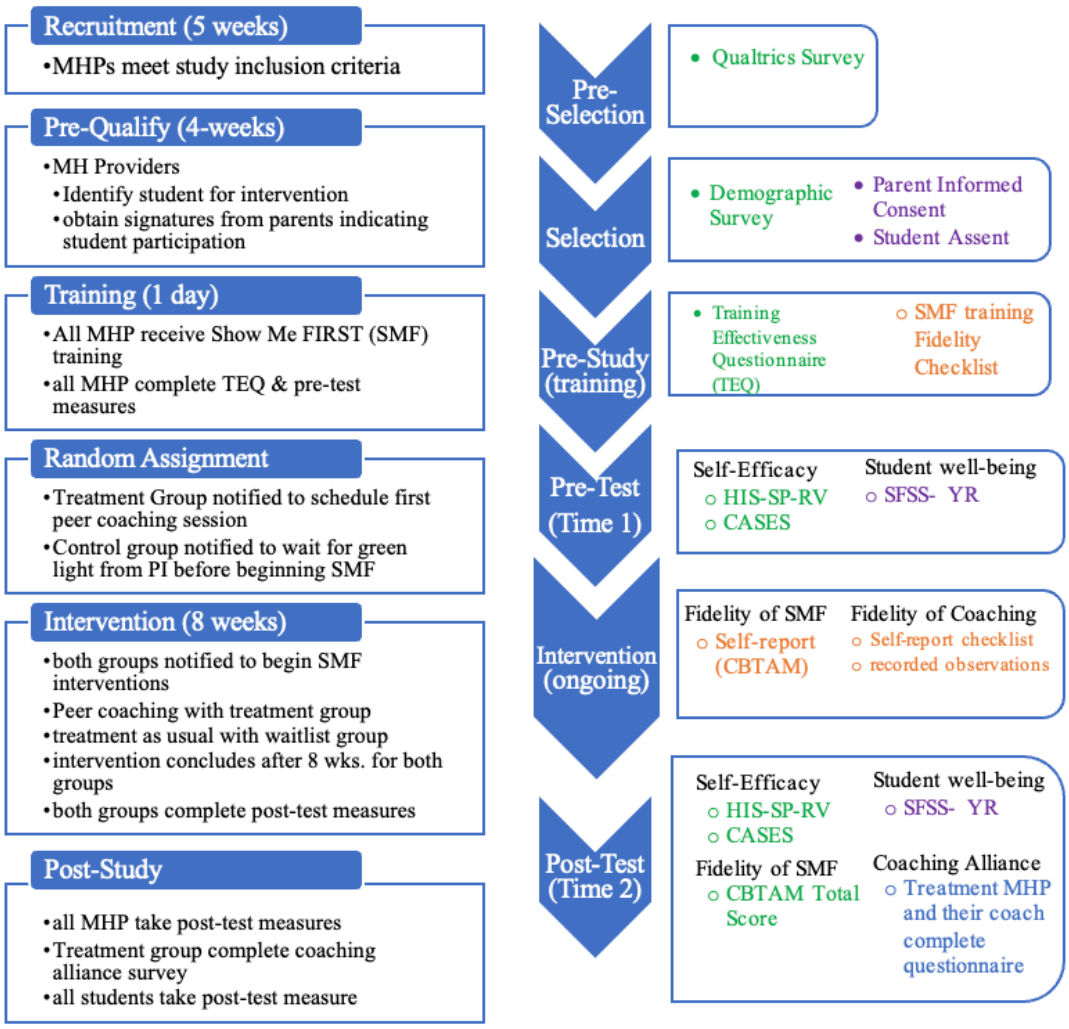
Data Collection

Data for the current study was collected via self-report and observation at Pre and Post intervention to address the dependent variable of MH provider self-efficacy (RQ1). One repeated measure was used to measure the dependent variable of student well-being (RQ2) at pre and posttest. Additional measures were used to gauge the perceived effectiveness of peer coaching (RQ3) by measuring the alliance between the peer-coach

and the MH professional along with perceived effectiveness of the training that all participants received at the beginning of the study. Finally, observations were conducted on 50 percent of peer coaching sessions by trained observers to capture the fidelity of the peer coaching sessions. All MH provider and student data for the current study was collected and stored online via Qualtrics. Data was housed online under password protection and was not shared with anyone other than the current study's investigator. (See Figure 3).

Figure 3

Study flow, data collection materials, and timepoints



CHAPTER III

Results

Overview

The current study's purpose was to evaluate the effectiveness of peer coaching on the self-efficacy of rural school-based MH providers implementing an evidence-based manualized individual CBT curriculum. Additionally, the current study also sought to examine the effect of peer coaching on student well-being. This was examined through the implementation of a Randomized Control Trial where all MH providers received professional development and half of the MH providers also received peer coaching intervention (treatment group). Half of the MH providers received professional development training only and completed practice as usual. Participants were randomly assigned to a study group and data was collected from all MH providers and students they worked with prior to the intervention and after the intervention was completed, resulting in a repeated pretest-posttest design. Results of the current study will be discussed corresponding to the study's research questions. First, results of MH provider self-efficacy will be presented. Second, results of student wellbeing will be presented. The MH provider self-efficacy and student wellbeing were analyzed using statistical methods to analyze reactions and determine whether significance existed. Third, results from the treatment group's ratings of the peer coaching alliance will be presented. Research question one and two originally included implementation fidelity as a covariate; however, due to inconsistency in participants completing fidelity ratings, fidelity was removed from both research questions one and two. The revised research questions are presented

in this section. A fourth research question about implementation fidelity was added and fidelity results are presented in this section.

MH Provider Self-Efficacy

*Research Question 1: What is the effect of peer coaching of an evidence-based school mental health intervention on implementor **self-efficacy**?*

To gather data necessary for measuring MH provider self-efficacy, a pre-survey was given to MH providers (both treatment and control groups) prior to entering into the training phase of the study to establish a baseline for all participants. At the study's end, a post survey (using the same questions as the pre-survey) was given to all MH providers in the treatment and control groups. The pretest and posttest surveys included a single self-report question of confidence for delivering individual counseling rated on a scale of 1-10 and then questions the *Counseling Skills* subscale of the *Huber Inventory of Self-Efficacy for School Psychologists – Research Version* (HIS-SP-RV; Huber, 2006*)* and questions from the *Counselor Activity Self-Efficacy Scales* (CASES; Lent et al., 2003). Questions from these two measures were combined and utilized for both the pre & posttests. Analyses were conducted using data collected from the CASES and HIS-SP-RV.

Self-Efficacy Results

The pre-qualifying survey asked each MH provider to provide a pre-rating of their confidence with delivering individual MH counseling within schools on a scale of 1 to 10 with one being “not confident at all” and 10 being “completely confident.” The average

initial confidence rating among all 14 MH providers was 6.5 with a minimum confidence rating of 2 and a maximum confidence rating of 10. There were four ratings below five and 10 ratings of seven or above. This pre-qualifying survey served as a pre-test confidence rating as it occurred before the study intervention period started. At posttest, MH providers were asked to provide their confidence rating with delivering individual MH counseling within schools on a scale of 1 to 10 again. Overall results of pretest and posttest confidence ratings from all MH participants are displayed below in Table 4.

Table 4

MH Participant overall pretest/posttest confidence ratings on 1-10 scale

Confidence rating	Pretest Percent	Posttest Percent
1	0%	0%
2	14%	0%
3	14%	0%
4	0%	0%
5	0%	7%
6	0%	0%
7	29%	7%
8	14%	43%
9	21%	21%
10	7%	21%

The average pretest confidence rating for the treatment group was 4.57 with a minimum rating of 2 and a maximum rating of 8. The average pretest confidence rating for the control group was 8.71 with a minimum rating of 7 and a maximum rating of 10. The posttest average rating for the treatment group was 8.71 (min: 8, max: 10) while the posttest average rating for the control group was 8 (min: 7, max: 10).

Descriptive Statistics. Descriptive statistics of the combined scores using the HIS-SP-RV and CASES can be seen below in Table 5 which includes Means and

Standard Deviation values for each group across each time point (e.g., Pretest/Posttest scores for the Treatment and Control groups). At pretest, the treatment group mean was 5.86 and the control group mean was 6.72. At the posttest, the treatment group mean was 7.38 and the control group mean was 7.07.

Table 5

Descriptive Statistics for Score Variable across Time and Group

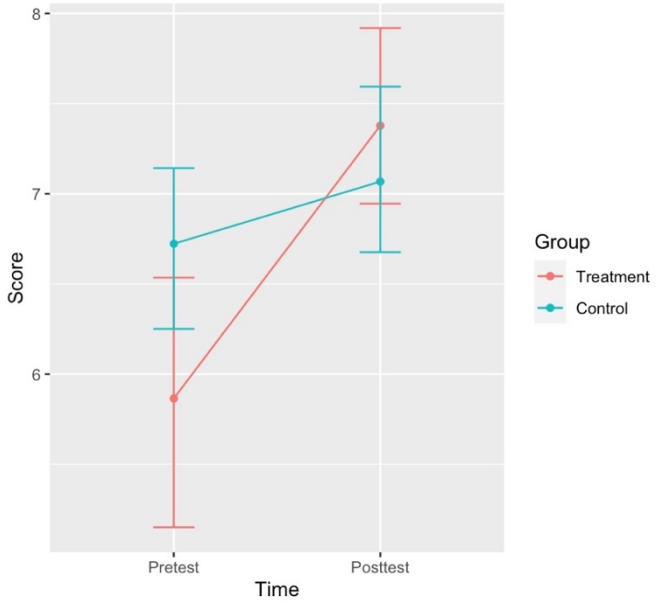
Group	Time	N	Mean	Standard Deviation
Treatment	Pretest	7	5.86	1.0
Control	Pretest	7	6.72	0.659
Treatment	Posttest	7	7.38	0.723
Control	Posttest	7	7.07	0.676

Note. $N = 14$ total. Treatment group $n = 7$, Control group $n = 7$.

Visual Inspection. Prior to completing analysis, the self-efficacy data was visually inspected using a box plot to show scores for both the treatment and control groups at both time points (Figure 4).

Figure 4

Line Plot of self-efficacy scores across time

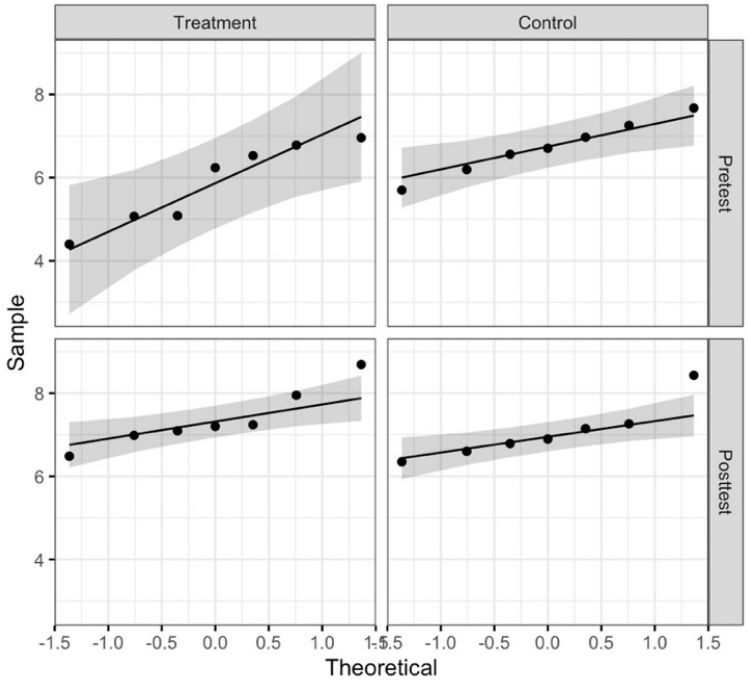


Tests of Assumptions. Before the analysis was conducted, tests of assumptions were completed to determine whether or not an ANOVA would be an appropriate method of analysis. Tests of assumptions include checking for normality informally using a QQplot (Figure 5) and formally using a Shapiro-Wilk's test.

Visual inspection of the QQplot indicates that the data were normally distributed. The formal normality assumption Shapiro-Wilk test aligned with the visual inspection of the data. The Shapiro-Wilk tests indicated that the assumption of normality was met for all combinations of group and time, as evidenced by p-values greater than .05. A Levene's test was used to check the assumption of homogeneity of variance of the between-subject factor (Group) at each level of the Time variable (Pretest and Posttest). The Levene's Test for Homogeneity of Variance revealed no significant differences in variances between the Treatment and Control groups (p = > 0.05), satisfying the assumption for subsequent analyses.

Figure 5

QQplot displaying Normality for self-efficacy scores



Self-Efficacy Analysis. The effects of the peer coaching intervention on MH provider self-efficacy (treatment) as compared to the control group were analyzed using a 2 by 2 mixed-effects repeated measures analysis of variance (ANOVA). The results revealed that there was not a statistically significant difference between groups based on the Group factor, $F(1, 12) = 0.48$, $p > 0.05$. When looking at the overall mean scores across both time points (Pretest and Posttest), the type of group (Treatment or Control) did not have a significant impact on self-efficacy scores. There was a significant effect of the Time factor, $F(1, 12) = 52.68$, $p < 0.001$ which indicates that there was a substantial increase self-efficacy scores over time, irrespective of the group to which participants belonged. There was a significant interaction effect between Group and Time, $F(1, 12) = 20.81$, $p < 0.001$ which implies that the effect of Time on self-efficacy differed between the Treatment and Control groups suggesting that the change in self-efficacy scores from Pretest to Posttest was not uniform across both groups as groups responded differently to the passage of time. See Table 6 for complete report of the ANOVA and Figure 6 for visual representation of the ANOVA interaction.

Figure 6

Self-efficacy scores across time between groups

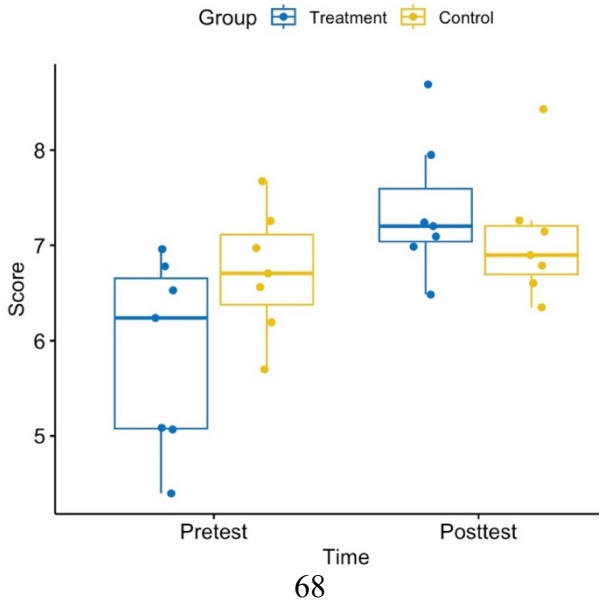


Table 6

Mixed-Methods ANOVA results using Pretest and Posttest data for both control and treatment groups as the criterion

Predictor	df_{Num}	df_{Den}	SS_{Num}	SS_{Den}	F	p	η^2_g
(Intercept)	1	12	1278.94	13.12	1169.61	.000	.99
Group	1	12	0.53	13.12	0.48	.501	.03
Time	1	12	6.04	1.38	52.68	.000	.29
Group x Time	1	12	2.39	1.38	20.81	.001	.14

Note. Numbers are derived from a mixed-methods ezANOVA in RStudio. df_{Num} indicates degrees of freedom numerator. df_{Den} indicates degrees of freedom denominator. SS_{Num} indicates sum of squares numerator. SS_{Den} indicates sum of squares denominator. η^2_g indicates generalized eta-squared.

Follow-up procedures. A one-way ANOVA was used to complete a simple main effects analysis of Time within each group and Group within each time point. For the Treatment group, a significant effect of Time was observed, $F(1, 6) = 52.0$, $p < 0.001$). Conversely, the Control group did not exhibit a significant effect of Time, $F(1, 6) = 3.58$, $p > 0.05$. See Table 7 for the results from the one-way ANOVA for both Time and Group. For the Control group, there was a trend towards significance for the Group effect at the Pretest time point, $F(1, 12) = 3.58$, $p = .083$). However, at the Posttest time point, the Group effect was not significant, $F(1, 12) = 0.687$, $p = .423$. Considering the Bonferroni adjusted p-value (p.adj), it can be seen that the simple main effect of Group was not significant at any timepoints, meaning that treatment and control groups are not different in either their Pretest or Posttest scores.

Table 7

One-way ANOVA results using Pretest and Posttest data for both control and treatment groups as the criterion

Group (Time)	Effect	*df*	*F*	*p*	*p.adj*
Treatment	Time	1	52.0	0.00036	0.00072

Control	Time	1	5.54	0.557	0.114
(Pretest)	Group	1	3.58	0.083	0.166
(Posttest)	Group	1	0.687	0.423	0.846

Note. Numbers are derived from a one-way ANOVA test using adjusted p-values in RStudio

As additional follow-up to the Treatment group interaction across time, estimated marginal means were obtained and pairwise comparisons were conducted with the aim of comparing the Treatment and Control groups at Pretest and pinpointing the difference in Treatment group from Pretest to Posttest (Table 8).

Table 8

Pairwise comparisons for Treatment and Control groups

Contrast	Time (Group)	*estimate*	*SE*	*df*	*t.ratio*	*p.value*
Treatment-Control	Pretest	-0.858	0.415	24	-2.065	0.0499
Treatment-Control	Posttest	0.310	0.415	24	0.746	0.4628
Pretest-Posttest	(Treatment)	-1.513	0.415	24	-3.642	0.0013
Pretest-Posttest	(Control)	-0.345	0.415	24	-0.831	0.4143

The results showed that the difference between the Treatment and Control groups at the Pretest time point is statistically significant (estimate = -0.858, $p < 0.05$); however, the difference between the Treatment and Control groups at the Posttest time point was not statistically significant (estimate 0.310, $p > 0.05$). When it comes to simple contrasts for Time within each Group, the results revealed that there was a statistically significant difference in the self-efficacy scores from Pretest to Posttest within the Treatment group with there being a higher mean at Posttest (estimate -1.513, $p < 0.05$). The change in

scores from Pretest to Posttest within the Control group was not significant (estimate -0.345, $p > 0.05$). In summary, there was a significant difference between groups at the Pretest time point. Specifically, within the Treatment group, there was a significant increase in scores from Pretest to Posttest while the Control group did not have a significant change in scores from Pretest to Posttest. No significant difference was found between the treatment and control groups at posttest. Given the multiple comparisons conducted in this analysis, a Bonferroni adjustment was applied to mitigate the risk of Type I errors. With four comparisons made, the significance threshold was manually adjusted to $\alpha = 0.05/4 = 0.0125$. As a result, only the Pretest to Posttest contrast within the Treatment group remains significant after Bonferroni correction, suggesting an effect of the treatment intervention on MH provider self-efficacy.

Student Well-being

*Research Question 2: What is the effect of peer coaching of an evidence-based school mental health intervention on **student well-being**?*

Student well-being was collected at the pretest and posttest timepoints by youth receiving the SMF intervention sessions from MH providers in the treatment and control groups. The students were asked to provide a self-report measure prior to receiving SMF intervention and then at the conclusion of the SMF intervention sessions. This information was collected via Qualtrics and administered by the MH provider (e.g., link provided on a laptop computer prior to or during the first SMF session).

Student Well-being Results

Student well-being was measured using the Youth Self-Report version of the *Symptoms and Functioning Severity Scale* (SFSS), which is part of the *Peabody Treatment Progress Battery* (PTPB) (Bickman et al., 2010).

Descriptive Statistics. Descriptive statistics of the student well-being dataset are shown below in Table 9 which includes Means and Standard Deviation values for each group across each time point (e.g., Pretest/Posttest scores for the Treatment and Control groups).

Table 9

Descriptive Statistics for the Student Well-being Score Variable across Time and Group

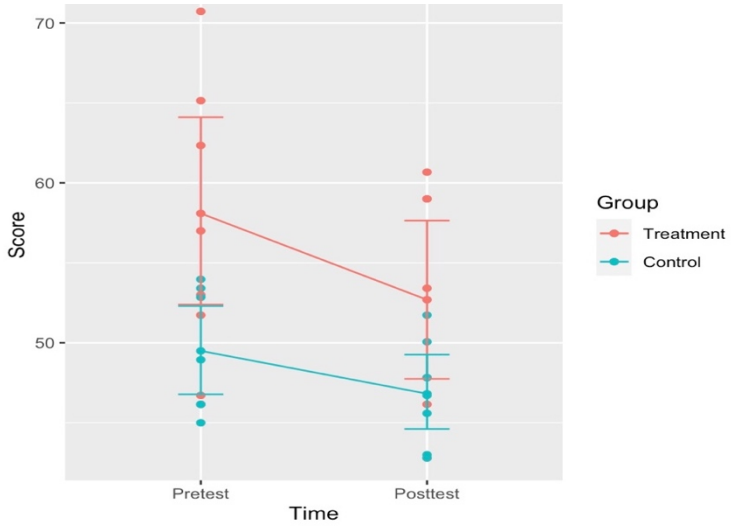
Group	Time	N	Mean	Standard Deviation
Treatment	Pretest	7	58.1	8.51
Control	Pretest	7	49.5	3.86
Treatment	Posttest	7	52.7	7.17
Control	Posttest	7	46.8	3.36

Note. n = 14 total. Treatment group N = 7, Control group N = 7.

Visual Inspection. Prior to completing analysis, the data was visually inspected.

Figure 7

Line Plot of student well-being SFSS scores across time



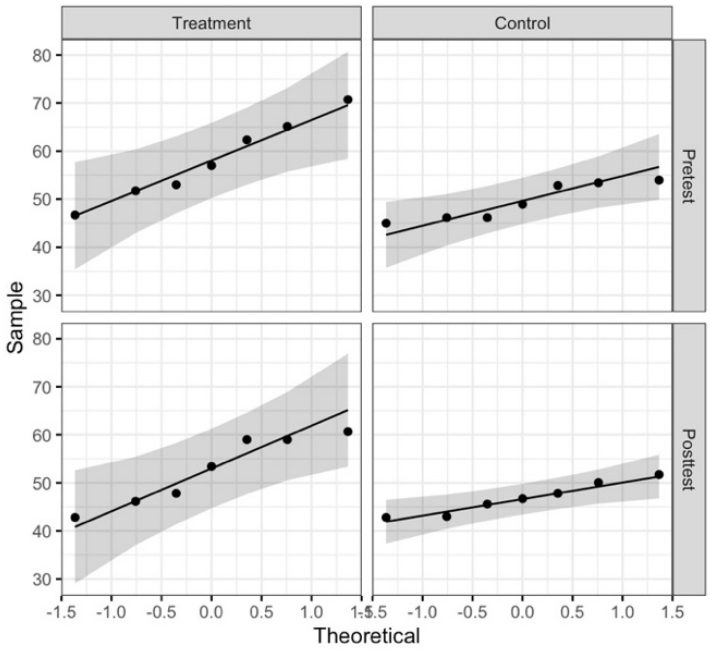
Note: Higher scores indicate more severity in problems while a lower score indicates more perceived well-being.

Tests of Assumptions. Similar to the analysis of the MH provider self-efficacy scores, tests of assumptions were conducted to determine whether or not an ANOVA would be an appropriate method of analysis. Formal and informal tests of normality using visual analysis with a QQplot and conducting a Shapiro-Wilk's test (Figure 8).

Visual inspection of the QQplot revealed that the data was normally distributed. The Shapiro-Wilk test also showed that the data was normally distributed for all combinations of group and time as the p-values were greater than 0.05. Levene's test for homogeneity of variance was conducted to assess the assumption of equal variances across groups. The results indicated a violation of this assumption, as evidenced by a statistically significant F-test, $F(1, 26) = 7.7457$, $p = .010$, suggesting that the variances across groups were not equal.

Figure 8

QQplot displaying Normality for student well-being scores



Student Well-being Analysis. Due to the violation of homogeneity of variance, an ANOVA could not be used as the results would assume HOV. Instead, the effects of the peer coaching intervention on student well-being, comparing student scores from the Treatment group to the student scores in the Control group were analyzed using a paired samples t-test with the Time factor, ignoring group, and a Welch's 2-sample t-test.

For the Paired-samples t-test, a statistically significant difference was observed in scores between the Pretest and Posttest time points, $t(13) = 3.10$, $p = 0.008$. This indicates that there was a significant change in scores from the Pretest to the Posttest. Additionally, Cohen's d was computed to quantify the effect size of the observed difference between the two time points. The effect size (Cohen's d) was calculated as 0.578, which falls within the moderate range according to conventional guidelines for interpreting effect sizes (Cohen, 1988). This suggests that the observed change between the Pretest and Posttest time points is of moderate magnitude (Table 10).

Table 10

Paired Samples t-test

Dependent Variable	*t*	*df*	*p*	*d*
Score	3.10	13	0.008	0.578

The Welch's 2-sample t-test examining the differences in scores between the Treatment and Control groups revealed a statistically significant difference in scores between the Treatment and Control groups, $t(18.4) = 3.06$, $p = 0.00659$. Specifically, the estimated mean difference between the Treatment group (M1 = 55.4) and the Control group (M2 = 48.2) was 7.24 points, with a 95% confidence interval ranging from 2.28 to

12.20. Cohen's d was employed to quantify the effect size of the observed difference between the Treatment and Control groups. The computed effect size was 1.16, which is categorized as large based on conventional criteria for interpreting effect sizes (Cohen, 1988). This suggests that the observed difference between the Treatment and Control groups is of substantial magnitude (Table 11, Figure 9).

Table 11

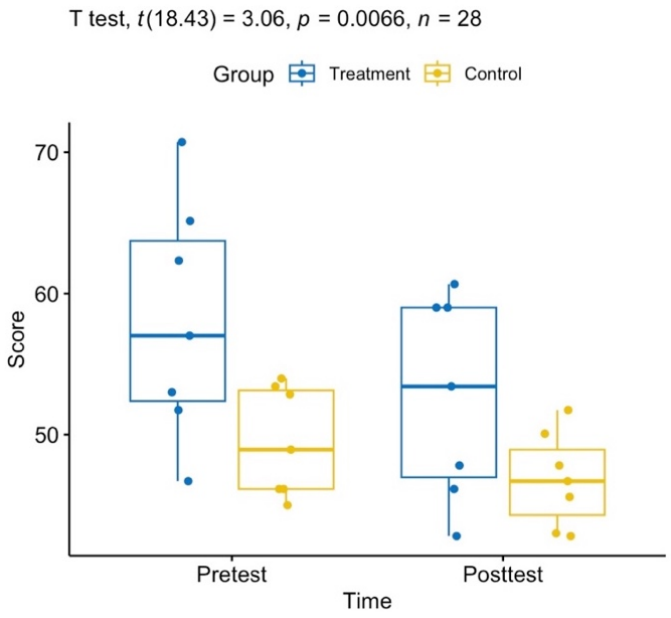
Welch's two-sample t-test

Method	Alternative	*M1*	*M2*	*M*1 - *M*2	*t*	*df*	*p*	*95% CI*	*d*
Welch Two Sample t-test	two.sided	55.39	48.16	7.24	3.06	18.43	0.00659	[2.28, 12.20]	1.16*

Note. The asterisk (*) in the "d" column of the table indicates a large effect size.

Figure 9

Welch's two-sample t-test of student SFSS scores at pretest and posttest for both groups



Coaching Alliance

*Research Question 3: Does the perceived quality of the **coaching alliance** impact the peer coaching process and outcomes?*

Peer coaches ($N = 2$) and MH providers in the treatment condition who received peer coaching ($N = 7$) each completed a measure of coaching alliance at posttest.

Coaching Alliance Results

Overall means reported by MH providers ($M1 = 4.71$, $M2 = 4.63$) were higher than the peer coach means ($M1 = 4.61$, $M2 = 3.40$). The means from MH providers that were engaged in coaching with Coach 1 were slightly higher than those engaged in coaching with Coach 2 (-0.08) while the mean scores reported by peer coaches had a greater difference (-1.21). All domain means rated by MH providers for both coaches were 4.5 or above suggesting that the peer coaching relationship was viewed as being a feasible working relationship and processes that was worth the investment because of the perceived overall benefit (Tables 12 & 13). Peer Coach 1 engaged in peer coaching with four MH providers and Peer Coach 2 engaged in coaching with three MH providers. Means were reported based on the coach pairing.

Table 12

Means and Standard Deviations for MH provider self-report ratings based on coach

	MH providers with Coach 1		MH providers with Coach 2	
Dimension	*M1*	*SD1*	*M2*	*SD2*
Working relationship	4.82	0.39	4.71	0.46
Coaching process	4.78	0.42	4.63	0.58
Investment	4.61	0.57	4.52	0.68

Perceived benefit	4.63	0.58	4.67	0.49
Total	**4.71**	**0.49**	**4.63**	**0.55**

Note. Coach 1 (4 MH providers); Coach 2 (3 MH providers); 5-point Likert scale ranging from Never (1) to Always (5).

Table 13

Means and Standard Deviations for the Coaching Alliance Survey – Coach Self-Report

	Coach 1		Coach 2	
Dimension	*M*	*SD*	*M*	*SD*
Working relationship	4.64	0.56	3.62	1.12
Coaching process	4.5	0.67	3.13	0.99
Investment	4.75	0.50	3.81	0.83
Perceived benefit	4.54	0.59	2.89	1.13
Total	**4.61**	**0.58**	**3.40**	**1.06**

Note. Coach 1 (4 MH providers); Coach 2 (3 MH providers); 5-point Likert scale ranging from Never (1) to Always (5).

The highest rated domain by the MH providers was the working relationship domain which assessed trust, mutual goal agreement, and collaboration (*M1* = 4.82, *M2* = 4.71). This was the second highest rated domain for both peer coaches (*M1* = 4.64, *M2* = 3.62).

The highest rated domain for the peer coaches was the investment domain which evaluated opinions on whether the peer coaching process was valuable for, whether there was enough time to engage in peer coaching, and overall perceptions of the importance of peer coaching and whether or not it would be recommended to others (*M1* = 4.75, *M2* = 3.81). The investment domain was the lowest rated domain for the MH providers (*M1* = 4.61, *M2* = 4.52).

The coaching process domain measured perception of the peer coach's coaching skills from the perspectives of the MH providers and peer coaches. The MH providers rated the coaching abilities of their peer coach higher (*M1* = 4.78, *M2* = 4.63) than peer coaches rated their own abilities (*M1* = 4.50, *M2* = 3.13).

Finally, the perceived benefit domain assessed the perceptions of whether or not peer coaching had a positive impact on skills related to implementing MH interventions, promoting student engagement, and behavior management strategies. The MH providers rated the perceived benefit of peer coaching at almost the same across both coaches (*M1* = 4.63, *M2* = 4.67) while the peer coach's ratings on the perceived benefits domain had the greatest difference in ratings (*M1* = 4.54, *M2* = 2.89) with a -1.65-point difference.

Overall, ratings reported by Coach 1, while still lower, were more aligned with the MH providers than Coach 2 who had mean ratings ranging from 3.81 to 2.89.

Implementation Fidelity

Research Question 4: What is the effect of peer coaching when controlling for implementation fidelity?

Show Me First Fidelity Results

The average fidelity rating reported by treatment group MH providers during peer coaching sessions was 5.77 (out of 7) with 7 representing "extremely well" adherence to SMF session fidelity. Overall, the CBTAM was completed 66 times. MH providers from the treatment group completed the CBTAM 38 times for 56 total SMF sessions (68% completion rate after each session). MH providers from the control group completed the CBTAM 28 times for 50 total SMF sessions (56% completion rate after each session). Average CBTAM ratings from all 66 instances is reported below in Table 4. Overall, the

average self-report fidelity rating on the CBTAM for the treatment group was 5.44 and 3.73 for the control group. The two areas that had the greatest difference between the treatment and control group self-ratings was related to goals for therapy and homework (questions #6 and #9 on Table 14).

Table 14

Average CBTAM self-report SMF fidelity ratings by group

In this week's appointment, how much did you do the following?	*Treatment (n=38)*	*Control (n=28)*
1. The child seemed to enjoy meeting with me today.	5.61	5.26
2. We role-played or practiced new skills or behaviors together	5.24	3.84
3. We talked about different feelings	5.65	3.30
4. We discussed unhelpful thoughts…	4.36	2.84
5. I described the treatment, such as the format of sessions, what is expected	5.70	2.91
6. We worked together to develop or change goals for therapy.	4.99	2.62
7. I assessed the child's current symptoms with a mood rating	6.30	4.87
8. I established an agenda or plan at the beginning of the appointment today.	6.37	4.45
9. I reviewed therapy homework and assigned new homework	5.70	2.82
10. I provided the child info about anxiety, depression, behavior problem…	4.20	2.91
11. I praised or reinforced the child for working hard in treatment	5.90	4.61
12. We developed strategies or plans for dealing with future problems	5.23	4.32
Total Average	**5.44**	**3.73**

Note. Ratings based on 7-point Likert scale from 1 ("not at all") to 7 ("a lot")

Peer Coaching Fidelity Results

Self-ratings resulted in an average fidelity score of 4.65 for Coach 1 and 3.04 for Coach 2 (Table 15). Overall, ratings for Coach 1 were higher than ratings for Coach 2.

Table 15

Average Self-report fidelity ratings for each peer coach

Dimensions	Coach 1 (N = 30)	Coach 2 (N =24)

Rapport Building	4.62	3.42
SMF Session Reflection	5.0	3.43
Feedback on recent SMF session CBTAM rating	4.63	1.25
Supervision of student specific concerns	4.81	2.50
Goal setting	4.97	3.26
Used importance, confidence, and/or comfort rulers	5.0	3.38
Modeling and practice of skills	4.05	2.09
MH provider "next steps" with accountability questions discussed	4.52	4.0
Coach "next steps" with accountability statements made	4.30	4.0
Total Average	**4.65**	**3.04**

Note. Scores reported on a 5-point Likert scale

Peer Coaching Interrater Fidelity Results

In total, there were 9 items that were rated by each trained observer. The average of the 9 items was used for each rater and the Weighted Cohen's Kappa was found utilizing RStudio calculations. This method was used instead of percent agreement because the weighted kappa can take the size of the difference between the two raters into account and account for the possibility that raters might guess on some variables (Cohen, 1960; McHugh, 2012). Each rater was given the same six peer coaching sessions to rate and the Weighted Kappa equaled 0.51 which could be interpreted as being moderate agreement (McHugh, 2012). A second training was completed with the raters in an effort to obtain greater agreement between raters. The number of questions on the peer coaching reliability form was increased from nine to 11. A second training was also provided which included a rubric of definitions of what would constitute a 5 rating, a 4 rating, a 3 rating, etc. for each of the 11 questions on the peer coaching reliability form. This rubric can be viewed in Appendix O. The second set of interrater reliability double-coding resulted in a weighted kappa score of 0.20 which can be interpreted as being within the minimal level of agreement (McHugh, 2012). Item analysis of the coding provided by each rater revealed that, on average, one rater typically rated higher (e.g., a 4

rather than a 3) and one rater typically rated lower (e.g., a 2 rather than a 3) which could be attributed to some of the differences in ratings. It can be concluded that the peer coaching intervention was delivered with somewhat variable fidelity between the two coaches based on the self-reported ratings from the peer coaches in the key aspects of peer coaching intervention for each session. The quality of fidelity also received mixed ratings by the independent observers. This will be discussed further in the discussion section of this manuscript.

CHAPTER IV

Discussion

The current study sought to examine the effects of peer coaching on the implementation of an individual MH intervention in rural schools. Specifically, the study sought to examine effects of peer coaching on the self-efficacy of MH providers to deliver an individual MH intervention as well as the effect peer coaching with a MH provider could have on student well-being. Finally, the alliance between the MH provider and peer coach was examined to gain insight into the perceptions of MH providers and peer coaches engaged in a peer coaching relationship. This study targeted school-based MH providers in rural schools which adds to the literature on rural schools and school-based MH service delivery. Specifically, in utilizing virtual methods to promote the delivery of MH services in rural schools. The virtual method of delivering peer coaching could be an answer to barriers of access for rural school-based mental health providers. Additionally, Peer coaching has already been found to be an effective method of encouraging the use of new practices over time in comparison to traditional professional development; however, minimal research has explored peer coaching practices with professionals other than teachers and with methods other than those that are academic in nature. This study expands peer coaching literature as it uses peer coaching with MH providers learning and implementing a MH intervention compared to how peer coaching is traditionally used in schools with teachers implementing academic curriculum.

The purpose of the current study was to develop a framework for peer coaching to be implemented in rural schools to provide support for school-based MH providers and positively impact self-efficacy for implementing individual counseling interventions to produce better outcomes for students. This chapter discusses the results and limitations of the

current study along with implications for practice, theory, and future directions for the study findings.

Summary of Findings

MH Provider Self-Efficacy

Research Question 1: What is the effect of peer coaching of an evidence-based school mental health intervention on implementor self-efficacy?

For this research question, it was hypothesized that the MH providers engaged in peer coaching (treatment condition) would have greater self-efficacy for delivering an individual counseling intervention when compared to the MH providers who received professional development training only and no peer coaching. Results of an analysis of variance (ANOVA) comparing pretest and posttest scores from both the treatment and control MH providers showed that there was a significant interaction effect between the group and time factor. Post-hoc analyses revealed that the treatment group showed a significant change in score from pretest to posttest, suggesting an effect of the peer coaching intervention. Additionally, results showed that the control group did not have a significant change in self-efficacy scores from pretest to posttest. These results, while they are taken from a small sample size, can be viewed as significant as an exploratory study as they suggest that self-efficacy of a MH provider can be supported and positively impacted via peer coaching. It is important to note that this study had no attrition once the intervention began. For peer coaching especially, once MH providers engaged in peer coaching, all MH providers completed at least six coaching sessions with most completing eight peer coaching sessions.

The MH providers who received peer coaching were able to deliver the MH intervention in its entirety to their students.

Student Well-Being

Research Question 2: What is the effect of peer coaching of an evidence-based school mental health intervention on student well-being?

Similarly to the self-efficacy of MH providers, it was hypothesized that student well-being scores would indicate greater well-being as a result of receiving individual counseling from providers who engaged in peer coaching compared to providers who did not engage in peer coaching. The ANOVA results compared pretest and posttest scores from both the treatment and control groups and found that there were significant results for the student group that worked with the MH providers who received peer coaching compared to the student group who worked with MH providers in the control group. It is important to note that the student groups (treatment vs. condition) were significantly different at pretest. This portion of the study was less controlled due to the fact that the MH providers were allowed to select students on their own. This aspect of the study will be discussed later in the limitations section. As a result of peer coaching, students working with MH providers in the treatment condition were exposed to weekly sessions. This could be due to the MH providers having more accountability with whether or not the individual counseling session would occur since the MH providers were discussing the date and time of their planned session with their peer coach. Additionally, MH providers who received peer coaching had increased self-reported fidelity of the SMF intervention, particularly with setting goals and assigning homework which could have contributed to increased well-being for students in the treatment condition.

Coaching alliance and the peer coaching process

Research Question 3: Does the perceived quality of the coaching alliance impact the peer coaching process and outcomes?

For this research question, it was hypothesized that the peer coaching alliance would produce positive ratings by both MH providers and peer coaches. Results showed that MH providers across both peer coaches, rated the peer coaching alliance higher across all domains compared to the ratings of the peer coaches. Overall means reported by MH providers were at 4.5 or above (on a scale of 1-5) suggesting that the peer coaching relationship was viewed as a feasible working relationship and the process was worth the investment because of the perceived overall benefit. The MH providers rated the coaching abilities of their peer coach higher than peer coaches rated their own abilities. There was not a significant difference in ratings from MH providers that received coaching from Coach 1 and peer coaching from Coach 2. The MH providers rated the perceived benefit of peer coaching at almost the same across both coaches while the peer coach's ratings on the perceived benefits domain had the greatest difference in ratings with a -1.65-point difference. The difference between the ratings of the MH providers and peer coaches was somewhat unexpected; however, even more unexpected was that the ratings of the peer coaches substantially differed across all areas. Coach 1's ratings were substantially higher overall than Coach 2's ratings. The lower ratings from Coach 2 did not seem to be reflected in the MH providers that rated their alliance with Coach 2. Differences in ratings between the two coaches could be related to years of prior experience with consultation and working within schools as well as differences in years of experience with the SMF intervention that was used for the current study.

Fidelity of Implementation

Research Question 4: What is the effect of peer coaching when controlling for implementation fidelity?

Show Me FIRST MH Intervention

There was a difference in completion rate of the self-reported SMF Fidelity measure (CBTAM) between the MH providers that received peer coaching (treatment) and the control group but the difference was less significant than expected. The treatment group completion rate of 68% was lower than anticipated, even after the CBTAM was actively discussed in peer coaching sessions. Despite this fact, it was anticipated that the treatment group would self-report higher fidelity ratings because they were receiving peer coaching on the SMF intervention that they were being asked to implement. Results showed that the CBTAM ratings were higher across all areas for the treatment group when compared to the control group. Some unanticipated differences that were significant were in the area of goal setting and reviewing/assigning homework. Setting goals is an important aspect of cognitive behavioral therapy (CBT) and if this aspect is not present in therapy sessions, therapy could not have a sense of direction and could lead to less effects of the intervention. Additionally, homework is a method for allowing the student to practice skills taught in session outside of session which would reinforce generalization of skills and could also lead to last impact for the student. The fact that goal setting and homework were self-reported by the control group as the lowest areas of fidelity on the CBTAM and they were also the areas with the greatest difference from the treatment group could suggest that peer coaching was effective in increasing the SMF

intervention fidelity would contribute to an increase in overall student well-being for the students who worked with the MH providers in the treatment group.

Peer Coaching

Similar to the peer coach ratings of their perceptions of the peer coaching alliance, the self-reported fidelity ratings of the peer coaches differed between the two coaches. The average rating for Coach 1 was 4.65 and for Coach 2 the average rating was 3.04. The largest difference in ratings fell in the area of providing feedback on recent SMF session CBTAM (-3.38 difference), supervision of student specific concerns (-2.31 difference), and modeling and practice of skills (-1.96 difference). The difference in self-reported fidelity ratings could be contributed to years of experience and familiarity with the SMF intervention. If a coach was less familiar with the SMF intervention, then they may also be less likely to model and practice skills. Overall, given that the peer coaching may have contributed to positive effects for MH provider self-efficacy and student well-being, it could be said that the self-report ratings provided by the peer coaches may not have had an impact on the overall study results. Still, it is important to notice that the qualities of peer coaches could be an area of future research given that they are responsible for the independent variable of the current study.

Implications for Practice

School-based MH providers in rural areas are often faced with limited access to supervision or other supports to enhance and maintain clinical skills (Duncan et al., 2014). In addition, school-based MH providers report a lack of confidence in handling

MH needs and feeling "underprepared and overwhelmed" when faced with being one of the only MH providers in rural school districts and communities (Splett et al., 2013, p. 250). The current study sought to assist in this area by providing training and accountability to increase self-efficacy for school-based MH providers in rural areas. Additionally, the current study showed that there is great potential for virtual peer coaching to increase the capacity of rural MH providers in rural areas to assess support at the click of a button, rather than expending valuable resources and time to travel to receive face-to-face support. School-based MH providers in rural areas are often faced with the challenge of being geographically isolated from other MH providers and lacking supervisory support, but having virtual access to a peer coach could remedy this challenge. When MH providers have support, then they may feel better prepared to provide individual counseling which would help with overall student outcomes.

The current study utilized virtual peer coaching with school-based MH providers working in rural areas. The findings suggest a positive impact on MH provider self-efficacy for delivering mental health interventions in schools. Peer coaching has already been proven to be an effective method for expanding the skills of teachers (Johnson et al., 2017; McMaster et al., 2020) and ensuring sustainable transfer of skills after receiving PD training. The current study shows promise for the generalization of peer coaching to MH providers. Common elements of peer coaching such as modeling and practice of skills; goal setting; self-reflection; and ongoing assessment and feedback are identified in the literature as being effective for assisting with the acquisition of knowledge/skills and sustained implementation of the learned skills. Graduate programs build in the ability to practice new skills but there are less opportunities to practice and learn new skills once

working within the field. School-based MH providers are often limited in their capacity to partake in professional development and, when they are able to, the PD opportunities are usually single exposure and increase knowledge but do not produce consistent and sustainable use of the new skills. Peer coaching for school-based MH providers is a promising way to promote the delivery of counseling within schools through the increase of MH provider self-efficacy for counseling delivery.

The current study, despite being an exploratory study, can still be viewed as making a meaningful contribution to the literature since the current study utilized a novel approach of applying peer coaching to MH providers within schools and specifically focused on rural schools. These two facts make the conclusions from the current study important for rural school-based MH research.

Limitations

First, the most obvious limitation to the current study is the small sample size. The ideal sample size for the current study was 28 participants with 14 in each condition. This sample size would have produced enough power to be able to make strong conclusions from the study results. Instead, the current study is viewed as an exploratory study since it is underpowered. As mentioned previously, this underpowered exploratory study is still able to make meaningful contributions to the literature as well as meaningful individual impacts for each MH provider participant and the student who they provided individual counseling to.

Secondly, randomized assignment resulted in groups with more school psychologists in the treatment condition and more school counselors in the control

condition which is viewed as a limitation. While it is important to note that there is a lot of overlapping training for school psychologists, school counselors, and school social workers and all providers used the same MH intervention, there could be differences in training that the current study did not assess for which resulted in differences in self-efficacy. Conclusions made from the current study are being made broadly for school-based MH providers and may not have individual applications to specific school-based MH providers.

A third limitation is that fidelity to the SMH MH intervention was self-report fand inconsistently reported in both groups which meant that fidelity could not be used as covariate. In addition, the inter-rater observations of the peer coaching sessions did not have high agreement despite operational definitions of ratings. The lack of agreement between inter-raters could be due to inter-rater characteristics and is an area where more explicit training would be needed in future research.

A fourth limitation that was discovered for the current study is that student selection was not controlled which led to significant difference in scores at pretest (groups were not similar at start). The results were significant for the treatment group, but further analysis revealed that there was a significant difference between groups at pretest, suggesting that there could be potential baseline differences. There was not a significance difference found between the groups at the posttest timepoint. The fact that the MH providers were responsible for choosing the student whom they would work with for the current study allowed for flexibility on the part of the MH provider but also made it be where the characteristics of the students could not be controlled.

A final limitation identified for the current exploratory study was related to the selection of measures used for MH provider self-efficacy. Specific questions from two self-

efficacy measures, the HIS-SP-RV and CASES, were used to form a combined measure of self-efficacy for the purpose of the current exploratory study. While these measures demonstrated reliable psychometric properties independently, their reliability for measuring self-efficacy when combined has not been studied and is viewed as a limitation when looking at MH provider self-efficacy results.

Directions for Future Research

Given that the current study sought to explore an aspect of literature that is limited with a small sample size, it would be important to replicate the current study with more participants in order to be able to provide power to the study results. Additionally, future research should explore the effects of peer coaching with a variety of MH interventions. The current study utilized a manualized, transdiagnostic MH intervention that was brief and covered cognitive-behavioral therapy (CBT) skills broadly. Future research could explore the effects of peer coaching on interventions specifically designed for internalizing concerns such as anxiety or depression and then with interventions designed for externalizing concerns such disruptive behavior and/or inattention. Lastly, the MH interventions could last longer than 8 weeks and the peer coaching could be delivered at different intervals (every week vs. every two weeks).

Another area of future research that would add to the literature would be to reproduce the current study with previous MH participants who received peer coaching acting as peer coaches to create a framework of support for rural areas. Future research could evaluate the self-efficacy across multiple time-points for providers who received coaching and then provided coaching.

Lastly, to account for training differences, future studies could focus on providing peer coaching to only one type of MH provider (e.g., school psychologists) and measure effects of peer coaching on self-efficacy while controlling for any possible differences in training and prior experiences.

Summary

MH of school-aged youth is a great area of need (Herman et al., 2021) which has grown exponentially in recent years as a result of the COVID-19 pandemic and continues to do so (Elharake et al., 2023; Hopkins & Pedwell, 2021; Schaffer et al., 2021). In rural areas, specifically, there are barriers to MH services relating to belief, acceptability, and accessibility (Blackstock et al., 2018; van Vulpen et al., 2018; President's New Freedom Commission on Mental Health, 2004). Schools are logical places for MH needs to be identified and treated (Hoover & Bostic, 2021). In rural areas, schools are often the only places where MH professionals work, but often, the MH professionals in rural schools are not confident in their ability to provide individual MH services (Paulson et al., 2015). The research on self-efficacy shows that when a MH provider's self-efficacy for providing individual MH services is lower, so is the amount of time spent engaging in individual MH services (Tang, 2020). The body of research focused on rural MH and, more specifically, rural school MH is limited. The current exploratory study sought to add to the literature for rural school MH while also supporting rural school-based MH provider self-efficacy for providing school-based MH services. The current exploratory study sought to provide a practical answer, using research-based peer coaching methods applied in academic contexts, to rural school-based MH practice. The goal of the current

exploratory study was to evaluate peer coaching within MH contexts in order to create a framework for future research to continue in rural school-based MH. Overall, the results from the current exploratory study are promising in that there were positive effects shown on MH provider self-efficacy when engaged with peer coaching. Additionally, implications were found for the effect peer coaching had on MH intervention fidelity. Areas of future research in regard to the qualities of a peer coach and the type of MH provider background and training were discovered. In conclusion, the current exploratory study accomplished the goal of evaluating peer coaching for MH interventions while also supporting rural school-based MH providers to promote MH services in rural areas and sets the stage for continued empirical attention on supporting rural MH in schools.

APPENDICES

Appendix A: Demographic Questionnaire

Please answer the following questions:

1. What is your age? (in increments of 5: 20-25, 26-30, 31-35, 36-40, 41-45, 46-50, 51-60, 61-65, 66-70, 71 and above etc.)

2. What is your gender identity? (Male, Female, Other, or "prefer not to disclose")

3. What is your race? (White, Black or African American, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander, Multiple (type in), Some other race (type in)

4. How many years of experience do you have of providing individual therapy within a school-based setting?

5. Do you hold any certificates or credentials in addition to the one that allows you to provide mental health services in schools? (ex: NCSP, Licensed Psychologist, NCC, LPC, Reading Specialist, Leadership)

6. What is the student ratio that you serve? (ex: 1 school psychologist to 1,500 students, 1 counselor to 480 students; 1 social worker to 250 students)

7. How many schools do you serve? (please indicate a number, even if the number is 1)

8. What are the primary grade(s) that you serve? (please type a range or specific grade levels, if multiple)

9. What is your theoretical orientation? (CBT, Strength's Based, Humanistic, Person-Centered, Family Systems, Behavioral, Don't Know, etc.)

10. What types of MH interventions have you previously used? (e.g., Coping Cat, Strong Kids, nothing formal, etc.).

11. What is the current time you spend providing individual MH interventions per week? (please indicate your best, average estimate in minutes)

Appendix B: Interest Form

Mental Health Training Interest Form

Are you interested in participating in the free school-based mental health training research study? Fill out the form below and someone will contact you! Thanks!

* Required

1. Full name *

Enter your answer

2. What is your preferred method of contact? *

- ◯ Email
- ◯ Phone

3. If you selected phone, please provide a good contact number (with area code) below:

Enter your answer

4. Email *

Enter your answer

Appendix C: Recruitment Email Script

Dear [Interested Participant Name],

Thank you for your interest in participating in my research study.

This training opportunity will start in mid-February to early March 2023 and will last approximately 8 weeks. The study would provide a one-time professional development training on a free research-based brief mental health intervention (Show Me FIRST) and then weekly individual (virtual) coaching support to you as you provide individual counseling to a student at your school. After the study, you can keep the study materials to continue to use as you choose.

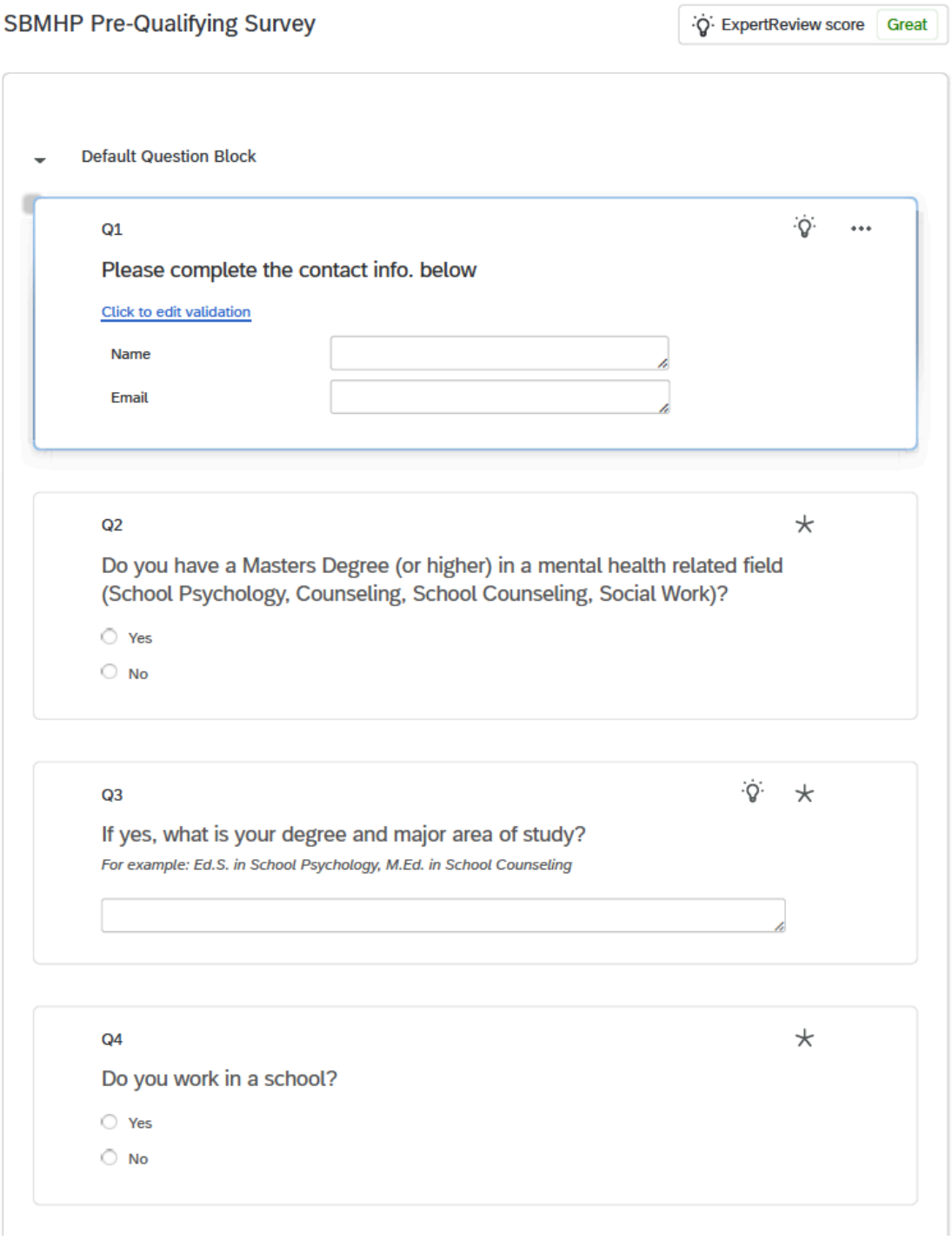
Do you have any specific questions? If so, please respond to this email and I would be happy to talk further!

If you would like to continue in the study, please click here to complete a brief screening questionnaire to determine your eligibility to participate in this research study.

Thank you for your time,

Alicia M. Meng, Ed.S., NCSP
Doctoral Candidate, School Psychology
University of Missouri – Columbia
Cell: 229-221-3563
Email: aliciameng@mail.missouri.edu

Appendix D: Pre-Qualifying Survey



Appendix D: Pre-Qualifying Survey

Q5

If so, what is the zip code of the school(s) where you work?

needed for "rural" categorization purposes

Q6 *

Do you have training or experience delivering individual mental health counseling in schools?

- Yes
- No

Page Break

Q7 *

If yes, what is your training or experience? Please briefly explain.

Q8

On a scale of 0 – 10 please rate your current confidence level in delivering individual counseling in schools

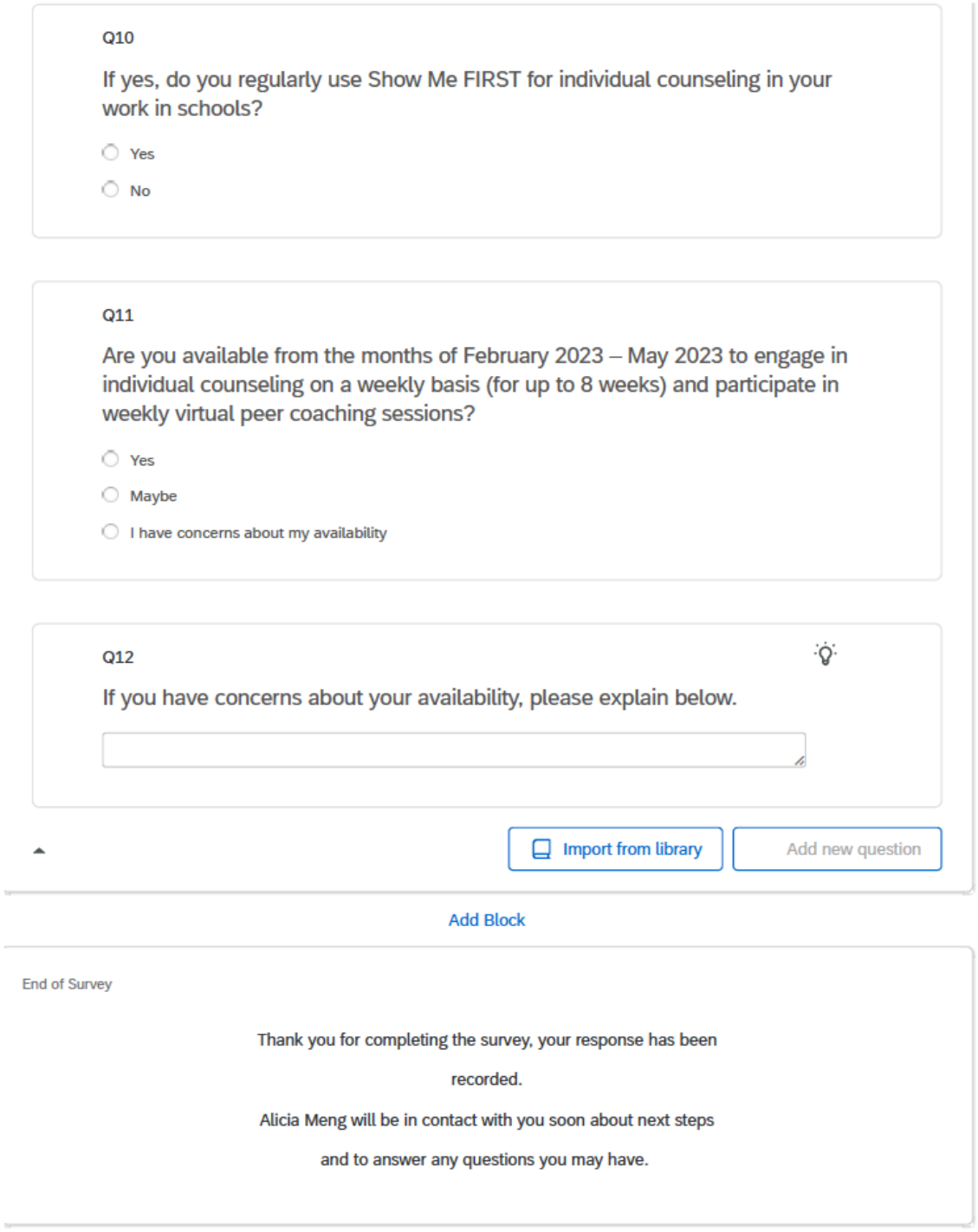
(with 0 being not at all confident at all and 10 being extremely confident)

Q9

Do you have training in the school-based intervention called Show Me FIRST?

- Yes
- No

Appendix D: Pre-Qualifying Survey



Appendix E: Zoom Meeting Email Script

Hello [Interested Participant Name],

Thank you so much for completing the pre-survey for my study. I am excited to have your interest. Would you be able to do a brief zoom meeting with me to go over the consent form and let me tell you the specifics of my study so that you are informed about the timeline and what all would be involved?

The meeting wouldn't last long (15 minutes or less). I am available in the evenings, early mornings, or Mondays / Wednesdays. I will work around what fits best for your schedule.

Excited to talk with you,

Alicia M. Meng, Ed.S., NCSP
Doctoral Candidate, School Psychology
University of Missouri – Columbia
Cell: 229-221-3563
Email: aliciameng@mail.missouri.edu

Appendix F: SMF Training Effectiveness Questionnaire

(1) *Not at all*, (2) *Slightly*, (3) *Somewhat*, (4) *Moderately*, and (5) *Extremely*.

1. To what extent are you satisfied with the training you received and the practices covered?
2. How credible did you find the presenter/consultant?
3. How well organized and executed do you believe the training program to be?
4. How satisfied are you with the content of the training and the practices covered?
5. How satisfied are you with the complexity of the training and the practices covered?
6. How comfortable are you with the practices contained within the training?
7. How useful are the information and practices from the training to you in your everyday clinical practice?
8. To what extent do you expect to be able to incorporate the concepts and techniques from the training into your daily work activities?
9. How compatible do you expect the practices from the training to be with the practical realities and resources of your agency / service setting?
10. How compatible are the information and practices with your agency / service setting's mission or service provision mandate?
11. How relevant are the information and practices to your client population?
12. How well do the information and practices fit with your current treatment modality, theoretical orientation, or skill set?
13. How compatible are the information and practices with your workflow timing (e.g., when and for how long you see clients)?
14. How well do the information and practices from the training fit with your overall approach to service delivery and the setting in which you provide care?

Please share any other comments or feedback here:

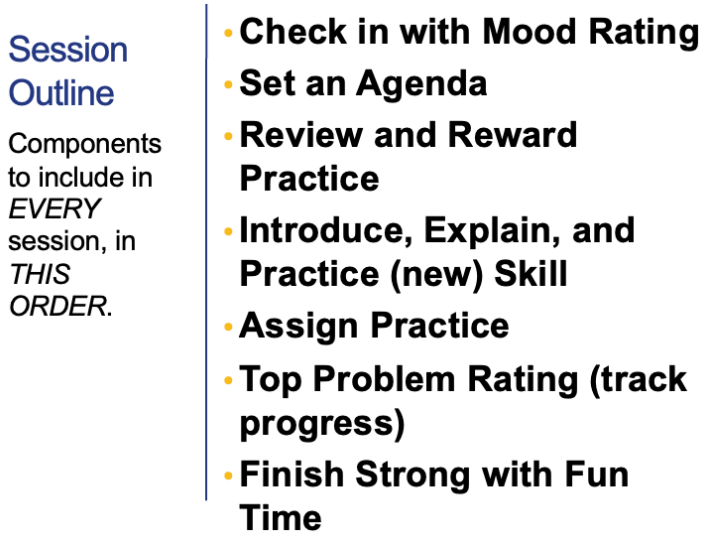
Appendix G: Study Checklist

Before your session:

1. Have coaching session prior to implementing each session (if in treatment group)
2. Get the student Pre-Survey completed (at the start of *first session* only: https://missouri.qualtrics.com/jfe/form/SV_0OIiDDX1jrpVSIe
3. Gather materials for session (print if necessary)

During session:

1. Follow session outline



2. Get Student top problem rating (complete google form https://docs.google.com/forms/d/e/1FAIpQLSfox9c92jl677AdZGP0LHqGC_1xjQ5fO_hsge6WJW3QSZmpww/viewform?usp=sharing or write down ratings in notes)

After session:

1. Complete CBTAM-M Session Fidelity form https://missouri.qualtrics.com/jfe/form/SV_8ofvZ6mFGIUMJ8i

Show Me FIRST **Session Schedule** (recommended in order to get 8 sessions)

1. Establish Rapport, set goals, introduce Find Your Feelings
2. Continue establishing rapport, continue Find Your Feelings
3. Initiating Problem Solving
4. Relax Your Mind and Body
5. Scan Your Thoughts
6. Try the Opposite (Part 1)
7. Try the Opposite (Part 2)
8. Ending treatment (Celebration and Personalized Coping Plan)

Appendix H: HIS-SP-RV Counseling Skills Domain

HUBER INVENTORY OF SELF-EFFICACY FOR SCHOOL PSYCHOLOGISTS—RESEARCH VERSION

COUNSELING SKILLS SUBSCALE

Please read the following questions and mark the answer that best describes your attitude to each question as indicated by the scale.

	1. Not well at all (1)	2. (2)	3. Not too well (3)	4. (4)	5. Pretty well (5)	6. (6)	7. Very well (7)
How well can you conduct crisis counseling? (1)	○	○	○	○	○	○	○
How well can you apply leadership skills for crisis prevention and management? (2)	○	○	○	○	○	○	○
How well can you assess appropriateness of referral for counseling? (3)	○	○	○	○	○	○	○
How well can you use group counseling skills? (4)	○	○	○	○	○	○	○
How well can you counsel children from different racial/ethnic groups? (5)	○	○	○	○	○	○	○
How well can you counsel individual children? (6)	○	○	○	○	○	○	○

Appendix H: HIS-SP-RV Counseling Skills Domain

How well can you use effective counseling skills? (7)	○	○	○	○	○	○	○

Appendix I: Counselor Activity Self-Efficacy Scale (CASES)

Counselor Activity Self-Efficacy Scales

PsycTESTS Citation:
Lent, R. W., Hill, C. E., & Hoffman, M. A. (2003). Counselor Activity Self-Efficacy Scales [Database record]. Retrieved from PsycTESTS. doi: https://dx.doi.org/10.1037/t00084-000

Instrument Type:
Inventory/Questionnaire

Test Format:
10-point scale ranging from no confidence (0) to complete confidence (9).

Source:
Lent, Robert W., Hill, Clara E., & Hoffman, Mary Ann (2003). Development and validation of the Counselor Activity Self-Efficacy Scales. Journal of Counseling Psychology, Vol 50(1), 97-108. doi: https://dx.doi.org/10.1037/0022-0167.50.1.97

Appendix I: Counselor Activity Self-Efficacy Scale (CASES)

Note . For all self-efficacy items, participants are asked to rate their confidence in their ability to perform specific tasks or to manage specific scenarios on a 10-point Likert scale ranging from no confidence (0) to complete confidence (9).

Helping Skill Self-Efficacy

Insight Skills

1. Immediacy (disclose immediate feelings you have about the client, the therapeutic relationship, or yourself in relation to the client)
2. Interpretations (make statements that go beyond what the client has overtly stated and that give the client a new way of seeing his or her behavior, thoughts, or feelings)
3. Self-disclosures for insight (disclose past experiences in which you gained some personal insight)
4. Challenges (point out discrepancies, contradictions, defenses, or irrational beliefs of which the client is unaware or that he or she is unwilling or unable to change)
5. Self-disclosure for exploration (reveal personal information about your history, credentials, or feelings)
6. Intentional silence (use silence to allow clients to get in touch with their thoughts or feelings)

Exploration Skills

1. Open questions (ask questions that help clients to clarify or explore their thoughts or feelings)
2. Listening (capture and understand the messages that clients communicate)
3. Reflection of feelings (repeat or rephrase the client's statements with an emphasis on his or her feelings)
4. Restatements (repeat or rephrase what the client has said, in a way that ism succinct, concrete, and clear)
5. Attending (orient yourself physically toward the client)

Action Skills

1. Information giving (teach or provide the client with data, opinions, facts, resources, or answers to questions)
2. Role-play and behavior rehearsal (assist the client to role-play or rehearse behaviors in session)
3. Direct guidance (give the client suggestions, directives, or advice that imply actions for the client to take)
4. Homework (develop and prescribe therapeutic assignments for clients to try out between sessions)

Session Management Self-Efficacy

Session Management

1. Help your client to understand his or her thoughts, feelings, and actions.
2. Know what to do or say next after your client talks.
3. Help your client to talk about his or her concerns at a deep level.
4. Build a clear conceptualization of your client and his or her counseling issues.
5. Help your client to explore his or her thoughts, feelings, and actions.
6. Respond with the best helping skill, depending on what your client needs at a given moment.
7. Help your client to set realistic counseling goals.
8. Keep sessions on track and focused.
9. Remain aware of your intentions (i.e., the purposes of your interventions) during sessions.
10. Help your client to decide what actions to take regarding his or her problems.

Appendix J: SFSS Youth Report

Your Behaviors, Thoughts, and Feelings

Below is a list of behaviors, thoughts, and feelings that kids and teens may experience. Please put an 'X' in the one box that best matches how often you have experienced each of these things OVER THE LAST 2 WEEKS – either Never, Hardly Ever, Sometimes, Often or Very Often. When answering, think about the different places you may have experienced these things, for example, at school, at home, with friends, or at work.

	IN THE LAST TWO WEEKS, HOW OFTEN DID YOU:	Never	Hardly Ever	Some-times	Often	Very Often
1.	. . . feel unhappy or sad?	☐	☐	☐	☐	☐
2.	. . . get into trouble?	☐	☐	☐	☐	☐
3.	. . . have little or no energy?	☐	☐	☐	☐	☐
4.	. . . disobey adults? (not do what adults told you to do)	☐	☐	☐	☐	☐
5.	. . . threaten or bully others?	☐	☐	☐	☐	☐
6.	. . . feel afraid that other kids would laugh at you?	☐	☐	☐	☐	☐
7.	. . . have a hard time waiting your turn?	☐	☐	☐	☐	☐
8.	. . . feel nervous and/or shy around other people?	☐	☐	☐	☐	☐
9.	. . . have a hard time sitting still?	☐	☐	☐	☐	☐
10.	. . . cry easily?	☐	☐	☐	☐	☐
11.	. . . annoy other people on purpose?	☐	☐	☐	☐	☐
12.	. . . argue with adults?	☐	☐	☐	☐	☐
13.	. . . throw things when you were mad?	☐	☐	☐	☐	☐
14.	. . . interrupt others?	☐	☐	☐	☐	☐
15.	. . . lie to get things you wanted?	☐	☐	☐	☐	☐
16.	. . . have a hard time controlling your temper?	☐	☐	☐	☐	☐

Appendix J: SFSS Youth Report

Peabody Treatment Progress Battery 2010

SFSS(Full): Youth

	IN THE LAST TWO WEEKS, HOW OFTEN DID YOU:	Never	Hardly Ever	Some-times	Often	Very Often
17.	. . . worry about a lot of things?	☐	☐	☐	☐	☐
18.	. . . have a hard time getting along with family and/or friends?	☐	☐	☐	☐	☐
19.	. . . feel worthless?	☐	☐	☐	☐	☐
20.	. . . have a hard time having fun?	☐	☐	☐	☐	☐
21.	. . . hang out with kids who get into trouble?	☐	☐	☐	☐	☐
22.	. . . have a hard time paying attention?	☐	☐	☐	☐	☐
23.	. . . have a hard time sleeping because you were worrying?	☐	☐	☐	☐	☐
24.	. . . feel tense?	☐	☐	☐	☐	☐
25.	. . . drink alcohol (beer, wine, hard liquor)?	☐	☐	☐	☐	☐
26.	. . . use drugs for non-medical purposes?	☐	☐	☐	☐	☐

Appendix K: Coaching Alliance Survey - Coach

Coaching Alliance Survey— Coach Form

	Never	Seldom	Sometimes	Often	Always
1. The provider and I agreed on what the most important goals for Show Me FIRST were.	☐	☐	☐	☐	☐
2. I felt that I was knowledgeable when it came to working with this provider.	☐	☐	☐	☐	☐
3. I was able to communicate effectively with this provider.	☐	☐	☐	☐	☐
4. The provider and I trusted one another.	☐	☐	☐	☐	☐
5. The provider was approachable.	☐	☐	☐	☐	☐
6. The provider and I worked together collaboratively.	☐	☐	☐	☐	☐
7. Overall, the provider showed a sincere desire to improve his/ her MHS delivery practices.	☐	☐	☐	☐	☐
8. The time spent working with the provider was effective and productive.	☐	☐	☐	☐	☐
9. The provider was accessible.	☐	☐	☐	☐	☐
10. The students benefited from my work with the provider.	☐	☐	☐	☐	☐
11. I was able to deliver support, recommendations, and technical assistance in a clear and concise manner to this provider.	☐	☐	☐	☐	☐
12. I was able to provide support that matched the needs of this provider and his/ her students.	☐	☐	☐	☐	☐
13. The services I provided incorporated the providers's views.	☐	☐	☐	☐	☐
14. The provider showed increased capacity to implement evidence-based practices.	☐	☐	☐	☐	☐
15. The coaching had a positive impact on the providers's MHS delivery practices.	☐	☐	☐	☐	☐

Appendix K: Coaching Alliance Survey - Coach

	Never	Seldom	Sometimes	Often	Always
16. I felt I was able to provide the appropriate amount of feedback to this provider.	☐	☐	☐	☐	☐
17. The coaching increased the provider's knowledge of strategies to promote student engagement.	☐	☐	☐	☐	☐
18. The feedback I gave the provider was practical and useful.	☐	☐	☐	☐	☐
19. The providers's knowledge of behavior management strategies increased as a result of the coaching.	☐	☐	☐	☐	☐
20. There was enough time available for this provider to participate in the coaching process.	☐	☐	☐	☐	☐

	Never	Seldom	Sometimes	Often	Always
21. The providers's knowledge of CBT practices was increased because of the coaching.	☐	☐	☐	☐	☐
22. The work I did with the teacher was important	☐	☐	☐	☐	☐
23. The coaching took too much time with this provider.	☐	☐	☐	☐	☐
24. The provider found the information I provided to be helpful.	☐	☐	☐	☐	☐
25. The provider will be able to effectively implement MHS in the future.	☐	☐	☐	☐	☐

Appendix K: Coaching Alliance Survey - Coach

	Never	Seldom	Sometimes	Often	Always
26. I think this provider would recommend peer coaching to another MH provider.	□	□	□	□	□
27. The provider's overall reaction to Show Me FIRST was positive.	□	□	□	□	□
28. The provider easily shared his/her concerns with me.	□	□	□	□	□
29. The provider was able to use coaching as a way to answer his/her own questions.	□	□	□	□	□
30. I was able to empower the provider to try new strategies.	□	□	□	□	□

Appendix K: Coaching Alliance Survey – Provider

Coaching Alliance Survey— Provider Form

	Never	Seldom	Sometimes	Often	Always
1. The coach and I agreed on what the most important goals for Show Me FIRST were.	□	□	□	□	□
2. The coach was knowledgeable.	□	□	□	□	□
3. The coach communicated effectively.	□	□	□	□	□
4. The coach and I trusted one another.	□	□	□	□	□
5. The coach was approachable.	□	□	□	□	□
6. The coach and I worked together collaboratively.	□	□	□	□	□
7. Overall, the coach showed a sincere desire to understand and improve MHS delivery.	□	□	□	□	□
8. The time spent working with the coach was effective and productive.	□	□	□	□	□
10. The coach was accessible.	□	□	□	□	□
11. My students benefited from my work with the coach.	□	□	□	□	□
12. The coach delivered support, recommendations, and technical assistance in a clear and concise manner.	□	□	□	□	□
13. The coach provided support that matched the needs of me and my students.	□	□	□	□	□
14. The coach incorporated my views into the services provided.	□	□	□	□	□
15. The coach helped build my capacity to implement evidence-based practices.	□	□	□	□	□
16. The coach had a positive impact on my MHS delivery practices.	□	□	□	□	□
17. I received an appropriate amount of feedback from the coach.	□	□	□	□	□
18. The coaching increased my knowledge of strategies to promote student engagement.	□	□	□	□	□
19. The coach provided me with practical and useful feedback and strategies.	□	□	□	□	□
20. The coach increased my knowledge of behavior management strategies.	□	□	□	□	□

Appendix K: Coaching Alliance Survey – Provider

	Never	Seldom	Sometimes	Often	Always
21. I had enough time available to participate in the coaching process.	□	□	□	□	□
22. The coach increased my knowledge of CBT approaches.	□	□	□	□	□
23. The work I did with the coach was important	□	□	□	□	□
24. The coaching took too much of my time.	□	□	□	□	□
25. The coach provided helpful information.	□	□	□	□	□
26. The coach really listened to my concerns	□	□	□	□	□
27. I will be able to effectively implement the Show Me FIRST intervention in the future.	□	□	□	□	□
28. I would recommend peer coaching to another MH provider.	□	□	□	□	□
29. My overall reaction to peer coaching was positive.	□	□	□	□	□

Appendix L: CBTAM-*Modified*

Your Name: _____ Student ID: _____ Session number: _____

Today's Date: _____ Session Start time: _____ Session End Time: _____

Please tell us about the last session or appointment. People talk about and do a lot of different things in therapy. We don't expect that you will have done all of these things in your last appointment. In fact, you may not have done any of these things.	Check here if skill was included in this session	If skill included in session, how much was the skill a focus this session?		
		Preview	Main Focus	Review
FIND YOUR FEELINGS: We went over different feelings, such as what they feel like, how they look, what they are called, and what triggers them.	☐	☐	☐	☐
INITIATE PROBLEM SOLVING: We went over specific steps for how to solve problems in daily life (e.g., coming up with possible solutions, considering likely consequences of each solution, choosing a solution to try, evaluating success).	☐	☐	☐	☐
RELAX YOUR MIND AND BODY: We went over relaxation skills (e.g., breathing exercises, mindfulness, muscle relaxation, imagery).	☐	☐	☐	☐
SCAN YOUR THOUGHTS: We discussed unrealistic and unhelpful thoughts that make the youth upset and ways to change those negative thoughts in order to feel better (e.g., cognitive restructuring, positive self-talk, thought stopping, distraction).	☐	☐	☐	☐
TRY THE OPPOSITE – ACTIVITY SCHEDULING: I helped the youth schedule more activities that are active, social, engaging, fun, mastery-building, and/or help others (e.g., music, sports, clubs, volunteering, other activities).	☐	☐	☐	☐
TRY THE OPPOSITE – GRADUATED EXPOSURE: I helped the youth confront anxiety-provoking situations instead of avoiding them (e.g., imaginal or in vivo exposure, interoceptive exposure, exposure with response prevention).	☐	☐	☐	☐
TRY THE OPPOSITE – MANAGING CONFLICT: I helped the youth practice managing conflictual and anger-provoking situations with prosocial, assertive communication strategies.	☐	☐	☐	☐
COPING PLANS: We developed personalized coping plans for dealing with future problems or situations that might trigger depression, anxiety, irritability or anger.	☐	☐	☐	☐

Appendix L: CBTAM-*Modified*

In this week's appointment, how much did you do the following? (1) Not at all, (3) A little, (5) Some, (7) A lot	
1. The child seemed to enjoy meeting with me today.	1 2 3 4 5 6 7
2. I described the treatment, such as the format of sessions, what is expected of them, and a rationale for how therapy works.	1 2 3 4 5 6 7
3. We worked together to develop or change goals for therapy.	1 2 3 4 5 6 7
4. I assessed the child's current symptoms and functioning by having them complete a measure or asking questions relating to their top problems or mood.	1 2 3 4 5 6 7
5. I established an agenda or plan at the beginning of the appointment today.	1 2 3 4 5 6 7
6. I reviewed therapy homework and assigned new homework or tasks to work on outside of therapy.	1 2 3 4 5 6 7
7. I provided information about the child's anxiety, depression, reaction to trauma or other condition.	1 2 3 4 5 6 7
8. I praised or reinforced the child for working hard in treatment (e.g., stickers, points, positive reinforcement).	1 2 3 4 5 6 7
9. We developed strategies or plans for dealing with future problems or situations that might cause the child anger, sadness, or nervousness.	1 2 3 4 5 6 7
10. We role-played or practiced new skills or behaviors together in the appointment.	1 2 3 4 5 6 7
11. We talked about different feelings, such as what they feel like, how they look, what they are called, or how to rate them using a number scale (e.g., feelings thermometer, SUDS ratings).	1 2 3 4 5 6 7
12. We discussed unhelpful thoughts that make the child upset and ways to change those negative thoughts in order to feel better (e.g., cognitive restructuring, positive self-talk, thought stopping, distraction).	1 2 3 4 5 6 7

Hawley, 2013; Cho et al., 2021; Cho, 2021.

Appendix M: Peer Coaching Protocol

Peer Coach ID #		Today's Date:		Start Time:	
Participant ID #:		Coaching Session #:		Stop Time:	

Rapport Building (provide a brief description of conversation):

Show Me FIRST Session **Reflection:**

Rate (from 1 – 7) how well you felt your last session went (1- not well, 7- extremely well):_____

- What Went Well?
- What to Improve?
- Ideas to Think about?

Supervision of student specific concerns: _____

Peer coach provides **feedback** on recent CBTAM fidelity self-rating:

Upcoming Show Me FIRST session topic: _____

Goal Setting:

- My goal is to implement the following strategy or strategies:
- What actions will I take to meet this goal?
  - What needs to be done?
  - What is needed to get it done?
  - When will it be completed?

How important is it for you to meet this goal in your SMF intervention delivery?
0 (Not important at all) ---------- 5 ---------- 10 (very important)

How confident are you that you will meet this goal in your SMF Intervention delivery?
0 (Not confident at all) ---------- 5 ---------- 10 (very confident)

Modeling and practice of skills (describe any specific strategies used):

How comfortable are you with the upcoming SMF session topic?
0 (Not comfortable at all) ---------- 5 ---------- 10 (very comfortable)

Appendix M: Peer Coaching Protocol

Next Steps and accountability:

- When is your next SMF session?
- What needs to be done before the next session?
- What will it look like when done?
- How will you know it is done?

MH Provider tasks:

- CBTAM fidelity Qualtrics link (if not completed for the session this week)

Peer Coach tasks:

- Upload peer coaching recording to coaching folder
- Upload session **transcript** to coaching folder
- Complete Peer Coaching Fidelity Rating

Appendix N: Peer Coaching Fidelity Protocol

Peer Coach ID #		Interrater ID#:		Today's Date:	
Participant ID #:		Coaching Session Date:			

Please use the following guidelines when selecting your ratings:

5) very good: this aspect of peer coaching occurred and was covered with quality that went above and beyond minimum standards.

4) Good: the aspect of peer coaching occurred and it went above minimum standards.

3) acceptable: the aspect of peer coaching occurred, but met minimum standards.

2) poor: not sure if this aspect of peer coaching occurred, but something occurred that was an approximation of the overall goal

1) very poor: this aspect of peer coaching was missing or not evident

1. Rapport Building
2. Show Me FIRST Session Reflection
3. Peer coach provided feedback on recent SMF session observation (if any) or CBTAM fidelity self-rating.
4. Supervision of student specific concerns:
5. Goal Setting
6. Used importance, confidence, and/or comfort rulers
7. Modeling of skills
8. Practice of Skills
9. Next steps and accountability

    - MH provider "next steps" were discussed.
    - MH provider accountability questions were asked (e.g., What will it look like when done? How will you know it is done?).
    - Peer coach "next steps" were discussed.
    - Peer coach accountability questions were asked.

Appendix O: Interrater Reliability Rating Rubric

Use the following rubric to guide your ratings of each question on peer coaching listed in the peer coaching reliability form.

5) Very Good: This aspect of peer coaching occurred and was covered with quality that went above and beyond minimum standards.

4) Good: The aspect of peer coaching occurred and it went above minimum standards.

3) Acceptable: The aspect of peer coaching occurred but met minimum standards.

2) Poor: Not sure if this aspect of peer coaching occurred, but something occurred that was an approximation of the overall goal.

1) Very Poor: This aspect of peer coaching was missing or not evident.

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VITA

Alicia was born and raised in a rural town in Southwest Georgia. She completed her Bachelor's of Science in Psychology (2011), Master's of Education (2013), and Education Specialist (2014) degrees in School Psychology from Georgia Southern University. She was a Nationally Certified School Psychologist and worked in a rural Georgia school-district for six years before pursuing further education at the University of Missouri – Columbia. Currently, Alicia is a doctoral candidate in the School Psychology program at the University of Missouri – Columbia. She is completing a pediatric clinical predoctoral internship at Boys Town Center for Behavioral Health in Omaha, NE which is part of the APA-accredited Nebraska Internship Consortium in Professional Psychology.

Alicia's research interests include promoting school-based mental health and supporting school-based mental health practitioners in rural areas. During her time at the University of Missouri – Columbia, Alicia worked with the Boone County Schools Mental Health Coalition and provided support to schools in the surrounding rural areas of Boone County Missouri. She has also worked on a research team with Dr. Erica Lembke and in the research lab of Drs. Sarah Owens and Shannon Holmes. Through these experiences, Alicia is listed as an author on five national conference presentations as well as four national conference poster presentations.

Next, Alicia will work as a postdoctoral associate at the University of Nebraska – Lincoln in the School and Counseling Psychology Clinic where she will focus on providing psychological services to rural southeast Nebraska as well as supervise graduate students. Alicia plans to become a licensed psychologist.