

SCHOOL MENTAL HEALTH PROVIDERS SELF-EFFICACY IN MANAGING
SUICID

A Thesis
by
REBEKAH SMITH

Submitted to the Graduate School
at Appalachian State University
in partial fulfillment of the requirements for the degree of
MASTER OF ARTS

May 2019
Department of Psychology

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REBEKAH SMITH
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APPROVED BY:

John Paul Jameson, Ph.D.
Chairperson, Thesis Committee

Lisa Curtin, Ph.D.
Member, Thesis Committee

Kurt Michael, Ph.D.
Member, Thesis Committee

Jamie Yarbrough, Ph.D.
Member, Thesis Committee

Rose Mary Webb, Ph.D.
Chairperson, Department of Psychology

Michael McKenzie, Ph.D.
Dean, Cratis D. Williams School of Graduate Studies

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Abstract

SCHOOL MENTAL HEALTH PROVIDERS SELF-EFFICACY IN MANAGING SUICIDE

Rebekah Smith

B.S., Appalachian State University

M.A., Appalachian State University

Chairperson: John Paul Jameson, Ph.D.

School mental health providers (SMHPs) frequently provide services for youth at increased risk for suicide, but few studies have examined SMHPs self-efficacy in managing suicide risk among adolescents. Suicidality is especially concerning in rural areas, given rural areas are associated with increased rates of suicide and lower access to mental healthcare resources than urban areas. This study assessed SMHPs self-efficacy in suicide risk management practices in rural and urban school settings in order to evaluate SMHPs experiences providing post-crisis suicide care. It was predicted SMHPs in rural areas would report lower self-efficacy in suicide care provision and lower administrative support in addition to higher perceived barriers, anxiety, role ambiguity, and average frequency of suicide care provision than urban SMHPs. It was posited that administrative support, perceived barriers, role ambiguity, anxiety, training, and average suicide care provision would uniquely predict self-efficacy. SMHPs employed in a school setting completed the SMHPs Suicide Management Self-Efficacy Survey. Analyses did not support hypothesized

differences in rurality. Results partially supported the proposed model of self-efficacy, with administrative support, perceived barriers, anxiety and role ambiguity predicting self-efficacy but not training and average provision of suicide care. These results suggest that suicide care and subsequent self-efficacy of SMHPs is a complex issue predicted not only by individual factors, but also by systemic and climate variables that may not be as readily recognized as important. Implications of this study highlight the necessity of evaluating individual and systemic factors impacting the experiences and self-efficacy of SMHPs involved in suicide care.

Acknowledgments

Throughout the writing of my thesis I have received a great deal of support and assistance. I would first like to thank my thesis advisor Dr. JP Jameson of the Psychology department at Appalachian State University. He has always provided me with assistance, guidance, and a much-needed laugh whenever I ran into difficulties, frustrations, or had questions regarding my thesis. He consistently allowed me and at times pushed me to make this paper my own work, but he never hesitated to steer me in the right the direction whenever he thought I needed it. I would also like to acknowledge my committee members Dr. Michael, Dr. Yarbrough, and Dr. Curtin all of the Psychology department at Appalachian State University. I am gratefully indebted to each and every one of them for their very valuable comments and guidance on this thesis. I would also like to thank my parents for lending a sympathetic ear and encouragement whenever they were needed. I'd like to thank Patrick for reminding me to trust my own abilities and for being my accountability when I may have been procrastinating. Thank you for always being there for me and providing me with a happy distraction outside of my academic world.

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Literature Review

School Mental Health Providers' Self-Efficacy in Managing Suicide

Suicide is the second leading cause of death among adolescents in the United States (Center for Disease Control [CDC], 2014). In a national survey of students in 9th through 12th grade, 17.7% of students reported seriously considering attempting suicide in the past 12 months, 14.6% reported having a plan about how to attempt suicide in the previous 12 months, and 8.6% reported having attempted suicide one or more times in the previous 12 months (Kann et al., 2016). Psychotherapeutic interventions have been suggested to reduce suicidality and likelihood of future attempts (Calati & Courtet, 2016), yet in the past 10 years adolescent suicide rates have increased in the United States (American Association of Suicidality [AAS], 2015; Curtin, Warber, & Hedgaard, 2016). Increased suicide rates suggest that some component of current suicide treatment is not adequately serving the needs of the population.

Understanding the risk management practices of clinicians who encounter suicidal adolescents is of paramount importance to reducing the number of adolescent suicide deaths. Renaud et al. (2009) found that over two-thirds of decedents did not have contact with a mental health professional within the month of death. Over half of these decedents were not diagnosed with a mental illness, and only 12.7% of decedents were in contact with psychiatric services in the month before completing suicide. Considering the lower treatment access rates of adolescents following the onset of suicide behaviors as reported by Nock et al. (2013) and Renaud et al. (2009), it appears that accessing a form of treatment for suicidality, prior to any attempt, may reduce the risk of suicide completion.

Rural Suicide, Health Care Access, and Barriers to Care

Suicidality is especially concerning in rural areas. Rural adolescent suicide rates are estimated to be nearly double those of urban areas (Fontenella et al., 2015); in comparison to urban areas, rural areas have the highest rate of completed suicides (18 deaths per 100,000 people), with the most rural areas reporting the highest rates of suicide. Additionally, it has been indicated that rates of completed suicides in rural communities increased by 20% between 2004 and 2013 (CDC, 2015).

In order to understand the needs of rural mental health care providers in suicide management practices, attention must be given to factors unique to rural areas, as these features may affect aspects of care. Risk factors associated with increased likelihood of attempting and completing suicide specific to rural areas include limited access to care and resources as well as high accessibility to lethal means (Cantrell, Valley-Gray, & Cash, 2012; Hirsch & Cukrowicz, 2014; Searles, Valley, Hodegaard, & Betz, 2014; State and Territorial Injury Prevention Directors Association, 2008). Additionally, several cultural variables specific to rural areas have been identified as influencing suicide risk, including stigma, confidentiality concerns, and norm enforcement (Beggs, Haines, & Hulbert, 1996; Calloway, Kelly, and Ward-Smith, 2012; Cantrell, Valley-Gray, & Cash, 2012; STIPDA, 2008).

When working in rural areas, mental health care providers should consider the role geographic isolation plays in treatment access and retention. Geographic isolation refers to the remoteness of populations in rural areas that can foster a lack of access to and availability of care in addition to limiting the availability of social support (Brems, Johnson, Warner, & Roberts, 2006). Healthcare providers working in rural areas have reported geographic

features such as distance, weather, remoteness, and terrain challenges to be among the most frequently encountered barriers in providing care (Brems et al., 2006). Low access to mental healthcare for rural populations subsequently implies a low likelihood that suicidal individuals will access a form of mental healthcare before making a suicide attempt (Brems et al., 2006; Calloway, Kelly, & Ward-Smith, 2012; Searles, Valley, Hedegaard, & Betz, 2014). Such implications emphasize the importance of managing rural suicidality in a readily accessible environment.

High rates of gun ownership have been associated with higher rates of completed suicides and attempted suicides (every 10 percentage-point increase in household gun ownership has been associated with 26.9% increase in adolescent suicide rates; Cantrell, Valley-Gray, & Cash, 2012; Hirsch & Cukrowicz 2014; Knopov, 2019; Kposowa, 2013; Miller, Barber, White, & Azrael, 2013). Gun ownership rates are notably different across rural and urban areas. Among adults living in rural areas 46% report owning a gun whereas 28% of those in suburbs and 19% in urban areas report owning a gun (Igielnik, 2017). The gun culture that is prevalent in rural areas promotes the ownership of firearms, thus increasing access to firearms as well as risk of utilizing a firearm to attempt suicide. This gun culture attests to the importance of adequate suicide care in rural areas as attempts are more likely to involve firearms, thus increasing the degree of lethality (Anglemyer et al., 2014).

School Mental Health Providers and Suicide Care

Incorporating mental health services into schools offers promising solutions to many of the barriers that rural adolescents face. Considering the accessibility of and large portion of time adolescents spend in school, schools provide an opportune platform for adolescent suicide management. School-based mental health services have been found to effectively

treat depression, anxiety, attention deficit/hyperactivity disorder, conduct disorder, and several other mental health needs of children and adolescents (Matta, 2015; Michael et al., 2015; Zirkelback & Reese, 2010). Additionally, school-based mental health services have been associated with decreases in both internalizing and externalizing problems (Matta, 2015; Zirkelback & Reese, 2010). Given school mental health providers (SMHPs; e.g., school counselors, school psychologists, and school social workers) are able to efficaciously treat various mental illnesses, it is likely SMHPs currently play an important role in preventing, intervening with, and managing adolescent suicide.

The effectiveness with which SMHPs provide suicide care is a topic of great importance, as SMHPs are highly likely to come into contact with adolescents with significant suicide risk. According to Nickerson and Zhe (2004), school psychologists ranked suicide as one of the most frequently encountered crisis events seen in adolescents. In a survey of licensed SMHPs, three out of four counselors reported that since beginning employment at their school, at least one student had attempted suicide (Debski, Spadafore, Jacob, Poole, & Hixson, 2007). Considering the likelihood that SMHPs will have contact with adolescents experiencing suicidality, it is imperative that these professionals feel confident in their abilities to care for such individuals beyond identification of risk. Literature involving school-based suicide interventions is limited, and, in most cases, focuses on the effects of prevention and intervention; overlooking the needs of SMHPs in suicide management. This gap in knowledge warrants investigation into the self-efficacy of SMHPs in managing suicide.

School-based suicide treatments are typically formatted as comprehensive, multi-tiered programs. Tier one treatments consist of universally delivered programs meant to

increase awareness, educate, and increase early detection of suicidality. These programs are the most commonly used methods of prevention and intervention (Robinson et al., 2013) and typically consist of peer leadership and curricular-based programs, gatekeeping, and screening training. Peer leadership programs and curriculum-based programs have been found to positively affect attitude and knowledge outcomes, students' likelihood to approach an adult for assistance, help-seeking behaviors, attitudes toward suicide behavior, and attitude toward peers experiencing suicidality (Katz et al., 2013; Robinson et al., 2013). Curriculum-based programs have also been associated with reduction of self-reported suicide attempts and suicidal ideation, but findings have been inconsistent (Aseltine, James, Schilling, & Glanovsky, 2007; Ciffone, 2007; Freedenthal, 2010; Hooven, Herting, & Snedker, 2010; Katz et al., 2013; Zalsman, 2016). Gatekeeping and screening programs have been associated with increased knowledge, improving attitudes, raising confidence of participants, and increasing treatment referrals and service use in high-risk adolescents (contingent upon availability of resources; Gould et al., 2009; Katz et al., 2013; Robinson et al., 2013; Zalsman, 2016). Tier one programs in rural areas have reported similar outcomes (Schmidt, Iachini, Koller, & Weist, 2015; Slavola & Omar, 2015).

In comparison to tier one interventions, less research has examined both tier two and tier three programs (Cooper, Clements, & Holt, 2011; Zalsman et al., 2016). The second tier of school-based treatment for suicide behaviors consists of programs targeted at students with significant risk factors who are not actively suicidal. The aim of these programs is to work with atrisk individuals in reducing risk of suicide. Common programs consist of counseling and educational trainings such as skills-training. Skills-training has been associated with reduction in reported hopelessness, decrease in probability of suicide as well as increased

problem solving and suicide intervention skills (Katz et al., 2013; Zalsman et al., 2016). Wasserman et al. (2015) found a targeted program to significantly reduce suicide attempts and severe suicidal ideation.

Tier three programs function on an indicated level of treatment, meaning that this level of treatment is for individuals in current crisis or with ongoing suicidal risk. Tier three programs, in comparison to tier one, are rarely researched in randomized controlled trials. This is possibly due to ethical limitations involved in suicide treatment research (Zalsman et al., 2016). However, existing evidence does suggest that tier three programs have been found to reduce negative attitudes toward suicide, decrease suicidal ideation, and decrease risk of suicide (Hooven, Herting, & Snedker, 2010; Tang et al., 2009; Thompson et al., 2001). Outcomes of tier three programs have also shown an increase in protective factors such as coping and problem-solving skills (Thompson et al., 2001).

There is also a notable lack of both current and past literature specifically addressing the perceived self-efficacy of rural SMHPs in managing adolescent suicide risk. Given the unique qualities of rural regions in addition to elevated rates of suicide and lethality of suicide attempts associated with rurality, such knowledge is greatly needed. In exploring the ability of SMHPs to confidently and successfully manage adolescent suicide, the challenges rural SMHPs can be recognized and ultimately the needs of this population can be identified.

Current practices for high-risk students. Suicidality is suggested to increase from early adolescence through mid-adolescence, then decrease and stabilize in early adulthood. (Goldston et al., 2015, Nock et al., 2013). Suicidal behavior appears to escalate with age among adolescents, especially in the domains of intent of attempts and lethality of attempts (Goldston et al., 2015). Other characteristics associated with high risk of future attempts in

adolescents include being alone, a serious wish to die, and planning an attempt for a long period of time (i.e., over an hour; Miranda, Jaegere, Restifo, & Shaffer, 2014). Literature suggests a high likelihood that individuals at high risk of attempting suicide can be safely deescalated, but far less literature has addressed post-crisis care and management of chronic ideation. In the case of most individuals, it is likely that suicidality does not end after hospitalization or upon stabilization; rather, long term support is necessary. For adolescents, several factors such as age and life events are suggested to influence suicidality (Fried, Williams, Cabral, & Hacker, 2013), making adequate management vital to preventing and intervening in future crises.

SMHPs often have protocols in place for situations in which a student reports or is reported to be experiencing suicidality (King, Foster, & Rogalski, 2013; Meares, Harris, & Franklin, 2006). Most commonly, SMHPs will assess for plan, intent, means, lethality of means, and biopsychosocial factors to determine risk. If significant risk is apparent, guidelines recommend that SMHPs notify a local emergency service provider as well as the student risk response coordinator and other personnel as necessary (SAMHSA, 2012). It is then suggested that guardians be contacted at this time and information regarding the student's current situation should be disclosed in addition to designating a location to meet with the guardians. After risk has decreased, guidelines propose that a plan be created with the guardians and student to address accessing medical and mental health services. If an individual is in need of immediate support, but is not admitted to a facility, it is recommended that crisis contacts be provided, in addition to meeting with the student and guardians to develop a safety plan (King, Foster & Rogalski, 2013). If an individual is not at immediate risk, but is at elevated risk, it is suggested that short-term treatment be provided.

Short-term treatment consists of frequent psychotherapeutic or counseling sessions, increases in parental monitoring, and a reduction of stressors.

In order to assist SMHPs in the management of high suicide risk students, the American Psychiatric Association (Jacobs & Brewer, 2004) has created a protocol to guide SMHPs in addressing students exhibiting such risk. The protocol suggests if suicide risk is high, a treatment plan be devised, treatment be coordinated with other professionals, the patient's progress be monitored, and ongoing assessments be conducted to assess the patient's safety, psychiatric status, and level of functioning. After suicide risk is reduced, guidelines recommend that SMHPs arrange follow-up appointments and check in with individuals who miss appointments to ensure client safety. The aforementioned protocol provides guidance for SMHPs working with students with high suicide risk, yet less information is provided regarding the reintegration of a student into school following periods of high suicide risk or hospitalization due to suicide risk.

As discussed previously, the period following hospital discharge due to suicide risk or a suicide attempt is a time of considerable risk; therefore, it is likely to be useful for SMHPs to be familiar with steps to assist in safely reintegrating individuals into school and managing chronic or ongoing suicide risk. In the event that a student is hospitalized on the basis of suicide risk, it is recommended that SMHPs assist in reintegrating the individual into school (Juhnke, Granello, & Granello, 2011). Policies for such instances vary by state, but in general it is suggested that SMHPs offer support to the student's family, provide resources to the family, and begin discussing the individual's return to school. Throughout the process of reentry, communication should be frequent among hospital staff, school staff, the student, and his or her family. Communication among said individuals ensures that information

regarding the student's safety and response to reintegration is disseminated as to guide treatment.

School Mental Health Professionals' Self-Efficacy

Though SMHPs often encounter suicide risk in students, they often are not confident in their ability to adequately address suicide risk. King, Price, Telljohan, and Wahl (1999) measured high school counselors perceived self-efficacy in assessing and intervening with adolescent suicide. Of those that responded, the majority [87%] believed it was their duty to identify students at risk of attempting suicide. In regard to reported efficacy in assessment of suicidality, less than half of counselors believed they could recognize a student at risk [38%] or that they had the ability to determine risk of suicide in students [47%]. In a more recent study, the preparedness of members of the National Association of School Psychologists (NASP) in managing a suicidal adolescent was assessed. Half of respondents denoted being "somewhat prepared," and 43% responded being well prepared to manage a client who presented as being suicidal (Debski et al., 2007). When asked about perceived ability to intervene in the event of an adolescent presenting as suicidal, 37% of school counselors believed if they asked a student if he or she was at risk of attempting suicide, it would reduce the chance that individual would die by suicide. Most counselors believed they could ask a student if her or she was at risk, and the majority believed they could provide support to at risk students. When assessing counselors' beliefs that support they provided to potentially suicidal individuals would be effective, 65% of those surveyed reported their services would reduce the likelihood of a student attempting suicide (King et al., 1999).

Individual factors. Self-efficacy is a concept first introduced in relation to Social Cognitive Theory [SCT] as a means through which individuals engage in and learn behaviors

(Bandura, 1986). Self-efficacy refers to an individual's belief he or she has the ability to elicit a desired outcome through his or her own behavior (Bandura, 1977a). Principles that guide the development and level of self-efficacy an individual possesses include enactive mastery, vicarious experiences, verbal or social persuasion, and physiological and emotional states (Bandura, 1977a). Enactive mastery refers to engagement and outcome of a behavior. If an individual engages in a behavior and outcomes are positive, it increases an individual's self-efficacy. If the opposite occurs, meaning if an individual fails or the intended outcome is not achieved, self-efficacy may decrease. Vicarious self-efficacy refers to the observation of another individual partaking in a behavior. It is important to note vicarious self-efficacy is impacted by the similarity between the observer and observed as well as the observer's pre-existing level of self-efficacy. Verbal or social persuasion addresses verbal or social cues that indicate an individual has the necessary skills to complete a task successfully. This source of self-efficacy is compounded if an individual, following verbal persuasion, effectively completes a given task. Physiological and emotional state impact self-efficacy based on an individual's interpretation of said states. If an individual feels anxious when beginning a task and interprets the feelings of anxiety as a signal he or she is not competent or is ineffective, self-efficacy is negatively impacted. If, in the same situation, the individual perceives the anxiety as a means to increase performance, self-efficacy is influenced positively. According to Bandura (1977a), self-efficacy not only dictates an individual's belief in his or her own abilities, it also impacts the activities one engages in, level of effort applied to complete a task, and duration of effort when distressed.

Several individual-level factors have been identified as salient to SMHPs in their work with adolescents experiencing suicidality. According to the extant literature SMHPs

frequently report their roles in suicide management as ambiguous. Debski et al. (2007) found that the most endorsed job description of school psychologists focuses on the assessment and remediation of students, not suicide intervention. In the same survey, 25% of participants endorsed seeing suicide prevention and response as being the job of others. Studies show that school counselors are more likely to perform tasks in accordance to their values and that performing nonrelated services has been associated with lower outcome expectancy and self-efficacy in SMHPS (Scarborough & Culbreth, 2008; Sutton & Fall 1995). This is concerning, as some individuals may feel that suicide management is a task not relevant to the professional role. Concern is also warranted if individuals are mantled with the role of managing an adolescent experiencing suicidality when he or she does not feel prepared to do so. However, more recent research has shown that in a sample of SMHPS, almost all participants were willing to intervene and thought it was their role to assess for suicide risk in adolescents (Gallo, 2016).

Another important individual factor to consider in perception of self-efficacy among SMHPS is anxiety. Bandura's (1977a) theory of self-efficacy suggested emotions and attitudes impact self-efficacy. This theory was supported as Bandura (1977b) found that high self-efficacy mediates the impact of anxiety in behavioral change, meaning individuals with high self-efficacy, or who develop high-self efficacy, will be more likely to engage in behavior change than those with low levels of self-efficacy. Further, Bandura (1994) noted individuals with high self-efficacy will interpret difficult tasks as opportunities for mastery whereas individuals with low self-efficacy will interpret challenging situations as threatening and will avoid or abandon such scenarios if possible. The influence of emotions such as stress and anxiety on individuals' self-efficacy could play a role in the self-efficacy of

SMHPs. Studies specifically investigating levels and predictors of self-efficacy have found that anxiety in clinical work predicted future self-efficacy with mediation by strength of supervisory alliance (Tsai, 2015) in addition to locus of control and controllability influencing self-efficacy (Ajzen, 2006). Existing literature about both general self-efficacy and mental health professionals' self-efficacy suggests that anxiety in relation to SMHPs' self-efficacy for addressing suicide should be explored. Exploring anxiety in relation to SMHPs' self-efficacy may ensure SMHPs are not being negatively impacted by anxiety, subsequently feeling less efficacious in approaching students with suicide risk.

In order to feel efficacious, individuals must be allotted opportunities to learn skills and build mastery. Suicide care training provides the opportunity to both gain new information and practice the utilization of skills necessary to engage in suicide care. Studies have consistently found that SMHPs are concerned with having adequate suicide care training (Nickerson & Zhe, 2004; Reeves, Wheeler, & Bowl, 2004). Gallo (2016) found that approximately half of participants felt that their training had prepared them to assess suicidality in adolescents, and slightly more than half of participants felt their training had prepared them to identify at risk individuals.

School-level factors. Another component that is likely to contribute to perceptions of self-efficacy in suicide management is school climate. Among studies investigating climate factors that influence the self-efficacy of SMHPs, two central themes have been identified among the literature: barriers and support. SMHPs face several barriers that ultimately affect ability to provide suicide related care (Atici, 2014; Cone, 2015). The most common barriers are need for or lack of administrative support, resistance from other professional groups, need for time to engage with school support staff, time constraints, not being in the same

school every day or serving too many schools to be involved, budget constraints, and insufficient expertise (Atici, 2014; Cone, 2015; Debski et al., 2007). Aside from the obstacles SMHPs must overcome to provide suicide care, participating in risk assessments or working with suicidal individuals, is a cause of concern for many SMHPs (Gallo, 2016; King, Foster, & Rogalski, 2013). These concerns may be exacerbated by unsupportive school administrative staff and colleagues, and could ultimately lead to reduced self-efficacy of SMHPs in responding to crises (Sutton & Fall, 1995).

Important branches of support thought to influence the self-efficacy of SMHPs are colleague support, administrative support, and social support. Studies investigating support in regard to its effect on self-efficacy found that perceived support such as acceptance from colleagues and school administration have been associated with increased self-efficacy among SMHPs (Atici, 2014; Gündüz 2012; Scarborough & Culbreth, 2008; Sutton & Fall, 1995). Though the exact nature of perceived support's effect on self-efficacy is not known, it is plausible that these perceptions can moderate feelings of self-efficacy.

Present Study

Several factors have been implicated in influencing mental healthcare providers' self-efficacy in the provision of suicide care, but the exact influence of these factors is not known. Additionally, characteristics and barriers unique to rural communities have been identified, but the influence of these factors on SMHPs serving rural areas are not fully understood. Similarly, literature addressing the self-efficacy of SMHPs in providing ongoing suicide risk management is limited in both urban and rural domains. The purpose of this study is to describe the current state of self-efficacy in suicide risk management practices among SMHPs in rural and urban school settings. Focus will predominantly address SMHPs' self-

efficacy in provision of post suicide crisis management as well as the potential influence of factors such as role ambiguity, anxiety when providing suicide care, average engagement in suicide care, level of training, barriers, and administrative support on self-efficacy. I predict that role ambiguity, perceived barriers, and anxiety will negatively predict self-efficacy. I also predict that providing suicide care, average frequency of engagement in suicide care, level of training, and administrative support will positively predict perceived self-efficacy.

I also intend to assess for differences in the aforementioned domains based on rurality and urbanicity of populations served. Information obtained in this study is intended to guide future research and provide direction in addressing the needs of SMHPs in suicide management. Based on the barriers to care that rural residents face and unique challenges present in rural areas, it is thought that SMHPs in rural areas will report lower self-efficacy in managing suicide than SMHPs serving urban communities. Similarly, with consideration to suicide rates, norms, barriers to care, and prevalence of stigma present in rural areas, I predict that SMHPs in rural areas will on average endorse higher rates of role ambiguity, a climate less supportive of the management of suicide risk, stronger perceptions of barriers to effective suicide management, and a higher frequency of provision of suicide management than their urban counterparts.

Method

To address the perceived self-efficacy of SMHPs in suicide management as well as other factors that may influence the effective implementation of suicide management techniques SMHPs were notified by email about the opportunity to participate in the study. SMHPs were asked to complete a survey addressing self-efficacy, personal factors, climate factors, and demographic information.

Participants and Procedure

Following Institutional Review Board approval [see Appendix A], participants were recruited via email; emails were sent through listservs to school mental health professionals and contained information about the study being conducted as well as a link to the survey. Participants were recruited through state and national mental health organizations such as the National Association of School Psychologists, American School Counselor Association, and School Social Work Association of America. Of the 90 organizations contacted, 14 agreed to distribute the measure to members through listservs or social media pages. Other organizations (76) declined to distribute, did not respond, charged fees, or required membership to distribute the measure. All study participants were volunteers and did not receive compensation for participation in the study.

Access to informed consent was provided to study participants via email. The initial page of the survey contained detailed information about procedures, benefits and risks of participating, and contact information of the researchers. Refer to Appendix B for human subject consent form questions. After completing the survey, participants were debriefed via the final page of the survey, and were encouraged to contact researchers if any questions about the study arose. A reminder email was sent to organization contacts approximately once a month, over a three-month period beginning when approval to distribute survey was given. Overall survey collection was discontinued after seven months.

A total of 151 responded to the survey. Sixty of the respondents completed less than 50% of the survey, and thus were removed, leaving 91 participants for the analyses. Respondents include 84 master's level and 6 doctorate level individuals. Participants included school counselors ($n = 38$), school social workers ($n = 43$), and other mental health

professionals ($n = 9$) who were currently employed in a school setting. Participants reported serving in current position for a variety of years, ranging from less than one year to 30 years ($M = 15.3$, $SD = 8.7$). Table 1 summarizes descriptive statistics for the respondents.

Measures

Informed consent forms were provided online to study participants. A self-compiled electronic survey, hosted in Qualtrics, was utilized in this study. The survey included questions measuring demographic information addressing years of experience, current position, percentage of student body on free or reduced lunch, and geographic location. Questions regarding experience with student suicidality, training, anxiety when providing suicide care, self-efficacy, role ambiguity, administrative support, and perceived barriers were also included in the survey. Refer to Appendix C for survey questions.

Self-efficacy scale. In order to create a measure of self-efficacy previously existing literature and measures addressing the aforementioned areas of interest were reviewed. Measures addressing self-efficacy in relation to suicide care were utilized to inform the creation of the survey items. Specifically, the Guide for Constructing Self-Efficacy Scales (Bandura, 2005), Confidence in Suicide Prevention Measure (Marzano, Smith, Long, Kisby, & Hawton, 2016) and the Consultation Self-Efficacy Scale (Guiney, Harris, Zusho, & Cancelli, 2014) were referenced in order to form questions addressing self-efficacy. The self-efficacy scale consisted of 21 questions ($\alpha = .93$) about confidence in ability surrounding suicide care and vicarious experiences with suicide. Vicarious self-efficacy questions were 5 questions in the survey asking about coworker experiences with suicide and exposure to suicide deaths. The remaining 16 question on this scale measured individual perceptions of self-efficacy (e.g., I feel confident in my ability to coordinate with outside mental health

professionals to manage students' suicide risk; I feel confident in my ability to provide care for a student with ongoing or chronic suicide risk). Questions were presented on a 7-point Likert scale (1 = strongly disagree; 4 = neither agree nor disagree; 7 = strongly agree). Higher scores reflect higher levels of self-efficacy. Average item mean scores for the total self-efficacy ranged from 3.05 to 5.81.

Anxiety scale. The scale for perceived anxiety was created to assess levels of anxiety during suicide care. The anxiety scale consisted of seven questions ($\alpha = .91$) to measure anxiety across levels of suicide care. Responses were presented on a 0 to 100 slider scale (0 = no anxiety, 50 = moderate anxiety, 100 = highest level of anxiety). Scores on the total anxiety scale ranged from 0 to 672.

School-level factor scales. Though school-level factors do not have a standard definition, I posit that, in relation to suicide care, the most important aspects include organizational values, level of role ambiguity, and administrative support within a school. The Climate Survey (Bruns, Walrath, Glass-Siegel, & Weist, 2004) and the Perception of School Climate Scale (Wolfe, Ray, & Harris, 2004) were reviewed in order to create questions to assess perceptions of administrative support and role ambiguity relative to suicide care. Perceived barriers refer to obstacles thought to influence behavior (e.g., time constraints); Janz & Becker, 1984). Items addressing perceived barriers were constructed based on the Gatekeeper Behavior Scale (Albright, Davidson, Goldman, Shockley, & Timmons-Mitchell, 2016) and the Difficulties in Suicidal Behaviors Intervention Questionnaire--Version for Psychologists and Doctors (Rothes, Henriques, Leal, & Lemos, 2014).

The administrative support scale consisted of 2 questions ($r = .462, p < .01$) about administrative support. Questions were presented on a 7-point Likert scale (1 = strongly disagree; 4 = neither agree nor disagree; 7 = strongly agree). Higher scores reflect higher levels of administrative support. Scores on the scales ranged from four to 14.

The role ambiguity scale contained 8 questions assessing different facets of role ambiguity ($\alpha = .86$). Questions were on a 7-point Likert (1 = strongly disagree; 4 = neither agree nor disagree; 7 = strongly agree). High value scores reflect higher levels of role ambiguity. Scores on scale ranged from 14 to 56. To measure experience with barriers, 16 questions ($\alpha = .91$) about perceived barriers surrounding suicide care were developed. Low value scores on this scale reflect lower levels of perceived barriers. Scores on the scales ranged from 20 to 97.80.

Measures of rurality. Rurality was assessed using the Rural Urban Continuum [RUC] Codes, which were developed by the United States Department of Agriculture (2013). Rationale for this study posits limited access to mental health care in rurality contributes to lack of treatment for individuals experiencing suicidality. Therefore, in accordance to theory contingent upon lack of access to care, population density and metro influence should be accounted for in determining rurality. Designations of rural or urban were based on the most recent RUC codes wherein values between one and three constitute an urban or metropolitan area and a value between four and nine is indicative of a rural or nonmetropolitan area. Counties of schools where participants reported providing school-based mental health services were utilized to determine rurality or urbanicity in accordance with RUC Codes.

Data Analysis

Mean item scores were utilized when computing scales for perceived barriers, school climate, anxiety for suicide care, training, and self-efficacy. Mean scale item score replacement was used for missing data replacement within scales. To examine differences between rural and urban SMHPS, a one-way multivariate of analysis of variance [MANOVA] was conducted with rurality as an independent variable and self-efficacy, administrative support, role ambiguity, average yearly rate of suicide care provision, amount of training, and perceived barriers as dependent variables. Consideration was given to utilizing a series of analysis of covariance given the potential influence of socioeconomic status on dependent variables in a manner that is not based in rurality or urbanicity. No significant differences between rurality and socioeconomic status were present, therefore, status was not utilized as a control variable. A multiple linear regression was utilized to determine if level of role ambiguity, perceived barriers, average yearly experience with suicide care, anxiety during suicide care, participation in training, and administrative support predict perceived self-efficacy.

Results

Participants reported 10.68 suicide attempts ($SD = 19.67$) by students in a school year; equating to a student suicide attempt ever 3.74 weeks in a 40 week school year. Participants reported engaging in suicide-related care on average 51.32 times each academic year ($SD = 51.18$) suggesting participants are providing suicide care two or three times per week during the academic school year. Crisis intervention ($M = 16.97$, $SD = 14.72$) and ongoing management ($M = 10.45$, $SD = 12.73$) were the most often reported forms of suicide care, whereas initiating hospitalization ($M = 6.21$, $SD = 8.07$) and reintegration ($M = 7.02$,

$SD = 8.07$) were the least reported form of suicide care in which the respondents engaged. Participants reported most often engaging in risk identification training ($n = 89$) and training in ongoing risk management ($n = 72$) least often. The majority of participants reported identifying suicide risk, estimating suicide risk, initiating hospitalization for student at high risk of suicide, suicide safety planning, immediate suicide risk reduction, providing ongoing care to a student with suicide risk, managing chronic suicide risk, and assisting a student with reintegration following hospitalization are almost always or always the responsibility of SMHP. Differences in average suicide attempts by students ($M = 10.68$, $SD = 19.67$) and suicide care provision between rural and urban SMHPs were insignificant. Anxiety was rated highest among participants when providing ongoing care ($M = 39.7$, $SD = 27.32$) and overall, was not significantly different among rural and urban SMHPs. Anxiety, as reported by participants, was lowest when identifying students with suicide risk ($M = 20.39$, $SD = 20.95$). The average item mean score for self-efficacy among participants was 5.08 ($SD = 0.62$). Self-efficacy ratings specific to levels of suicide care revealed participants felt the highest levels of self-efficacy when safety planning ($M = 6.26$, $SD = 1.06$) and identifying risk ($M = 6.22$, $SD = .83$) and lowest levels of self-efficacy when providing ongoing risk management ($M = 5.34$, $SD = 1.50$). Table 2 summarizes self-efficacy and training participation. The descriptive statistics for suicide care provision and anxiety experienced during suicide related care descriptive statistics are summarized on Table 3. Table 4 summarizes statistics for perceived role.

To test the hypothesis that participants providing care in rural areas, in comparison to those in urban communities, would report lower self-efficacy and administrative support as well as report higher rates of role ambiguity, suicide care provision, anxiety during suicide

care, and perceived barriers a MANOVA was utilized. Using Wilk's Lambda, the overall model was not significant $F(8, 57) = 1.330$, *Wilk's Λ* = .843; η^2 .157 $p = .248$. These results did not support the hypothesis that significant differences would exist between SMHPs self-efficacy, administrative support, role ambiguity, suicide care provision, anxiety during suicide care, and perceived barriers based on rurality. Table 3 summarizes the descriptive statistics and analysis results.

To test the hypothesis that role ambiguity, perceived barriers, participation in training, anxiety during suicide care provision, rate of suicide care provision, and administrative support would uniquely predict level of self-efficacy, a multiple regression analysis was conducted. The overall model was significant, $F(6, 63) = 21.16$, $p < .01$ $R^2 = .67$. Results partially supported the hypothesis. The model showed administrative support positively and significantly predicted self-efficacy, and anxiety while providing suicide care, role ambiguity, and perceived barriers negatively and significantly predicted self-efficacy. However, the hypothesis that average frequency of engagement in suicide care and amount of suicide training was not supported, as these two factors did not significantly predict self-efficacy. Table 4 summarizes the analysis results.

Discussion

This study aimed to describe the current state of the overall self-efficacy in suicide risk management practices among SMHPs in rural and urban school settings. Specifically, data were collected to quantify SMHPs' self-efficacy in provision of post suicide crisis management in addition to identifying potential influence of factors such as role ambiguity, suicide care provision, anxiety during suicide care, and perceived barriers and administrative support on self-efficacy.

Suicide care provision rates in combination with reported anxiety and training participation are also of great interest in this study. SMHPs reported providing immediate suicide crisis intervention, initiating potential hospitalization, and chronic or ongoing risk management as the most frequently provided levels of suicide care. Immediate intervention and ongoing care were rated overall as the most anxiety-inducing types of suicide care among participants. Despite the high rates of suicide care provision and anxiety for the aforementioned types of care, SMHPs reported the lowest levels of training for immediate crisis intervention and ongoing risk management. Together, these results indicate SMHPs' experience in suicide care, specifically in initiating hospitalization, immediately intervening with suicide crisis, and providing ongoing risk management should be of particular focus in future research. Continued research into the experiences of SMHPs in these domains of suicide care could provide insight into barriers that impact the ability of SMHPs to provide care, gaps in existing suicide care policy that undermine SMHPs professional ability, need for training or support, and systemic or community-based concerns that contribute to the anxiety of SMHPs. Additional measures might be developed to assess the factors uniquely contributing to anxiety of rural based SMHPs, given notable differences in anxiety during immediate suicide intervention, initiating hospitalization, and ongoing suicide risk care.

SMHPs in rural and urban areas reported providing some level of suicide care on average at least two or three times per school week. Though differences between rural and urban SMHPs were present in reported suicide attempts per year and suicide care provision per year, differences were not significant. Similarly, self-reported experiences of suicide care based on self-efficacy, administrative support, role ambiguity, suicide care provision, anxiety during suicide care, and perceived barriers were not significantly different between SMHPs

serving rural or urban communities. Differences in rates of suicide based on rurality have been established (Fontenella, 2015); however, based on these findings, it is possible that differences in experiences of self-efficacy in suicide care across rural and urban domains do not greatly differ. That is to say, rates of suicide in areas are likely to vary on the basis of several factors, one of which is rurality. Rurality, in this case, might in turn be associated with numerous suicide risk variables, including increased access to and propensity for the use of highly lethal means of suicide; reduced perceived social support and ability to cope with daily stressors; demographic features also associated with suicide including age, race and ethnicity; and low rates of treatment seeking and lack of access to resources (Fontenella, 2015; Guerrero, 2019; Nestadt, Triplett, Fowler, & Mojtabai, 2017). Each of these factors could account for higher rural adolescent suicide rates despite similar levels of self-efficacy in rural and urban SMHPs.

Several factors, outside of school, influence suicide rates. Therefore, self-efficacy of SMHPs alone cannot be expected to account for differences in suicide rates. However, SMHPs' self-efficacy still plays an important role in suicide prevention and care. According to the National Center for Education Statistics (2017), in the United States, between 1992 and 2015, 47 student deaths occurred in schools [deaths in school shootings were not included in this measurement]. Of the deaths occurring in schools, 17 were suicides [1 suicide death for every 1.9 million students]. The low rate of suicides in schools exists across rurality and urbanicity, attesting to the importance of support from SMHPs. Students spend at least 21% of their day in school, yet 0.5 of total suicides occur in school. Having access to mental health support at school could contribute to the low number of violent deaths occurring in school. Given that SMHPs are likely to come into contact with adolescents experiencing

suicidality and are an accessible source of support, it stands that the self-efficacy of SMHPs remains an integral part of adolescent suicide prevention. SMHPs not only function as sources of primary support for adolescents experiencing suicidality, but also function to communicate with outside healthcare providers, families, and school staff to ensure the safety of students. Without the support of SMHPs or if SMHPs did not feel efficacious in providing care, students would lose vital sources of support, advocacy, and ultimately, protection when facing suicidality.

Although SMHPs have an important role in suicide prevention, the nonsignificant differences in SMHPs' self-efficacy do not account for factors, beyond school, that influence suicidality. Existing literature notes despite higher suicide rates in rural areas, treatment seeking is limited, and ultimately lower than would be expected (Armstrong, 2014; Brems et al., 2006; Calloway et al., 2012; Guerrero, 2019; McLoughlin, 2019; Searles et al., 2014). Specifically, nonsignificant differences could be due to lack of access to rural mental health care services, underreporting by rural students, students' own low self-efficacy to manage suicidality, low belief in effectiveness of suicide care, discomfort or self-stigmatizing when seeking care, or due to concerns about maintaining confidentiality when receiving suicide related care. Determining if the majority of students have access to and feel comfortable seeking mental health care services would help identify barriers to address for students in need of or accessing services. Additionally, ascertaining accessibility to care and likelihood to utilize treatment could assist in accounting for differences [or lack thereof] in rates of suicide care provision between rural and urban SMHPs.

In relation to self-efficacy of rural and urban SMHPs providing suicide care it may be beneficial for SMHPs' perception of self-efficacy in relation to systemic and community

specific barriers to be evaluated as such variables could impact suicide care provision. Past studies of self-efficacy have found that positive feedback, belief in ability to impact suicidality, and support from supervisors as well as coworkers influence self-efficacy (Czyz, Horwitz, Yeguez, Foster, & King, 2017; Daniels & Larson, 2001, Knox, 2006; and Tsai, 2015). Future research may seek to identify important sources of feedback and support as well as factors that increase beliefs that suicide care will effectively reduce suicidality of students. Additionally, self-efficacy studies in the future might attempt to further breakdown the provision of suicide care into levels (e.g., risk assessment, safety planning, ongoing care) with variable levels of suicide risk. This could be achieved through the use of vignettes describing students with different levels of suicide risk. It could also be useful in a vignette-based study to allot follow-up questions to vignettes specifically aimed at identifying individual, school-based, and community-based factors that could influence the self-efficacy of SMHPs. Further research should be done with hopes of understanding suicide care provision by identifying potential environmental differences in the provision and utilization of suicide care. Identifying factors impacting the ability of individuals to seek out and utilize suicide care as well as factors impacting the provision of suicide care are imperative to decreasing adolescent suicide and decreasing the difference in adolescent suicide rates in rural and urban areas.

In combination with systemic factors not accounted for by this study, lack of significant differences between rural and urban SMHPs self-efficacy may partially be accounted for by a ceiling effect. Overall, SMHPs in this study reported high levels of self-efficacy. These findings run contrary to the findings of Gallo, 2016; King et al., 2006, and Debski et al., 2007 in relation to levels of self-efficacy reported. Each of these studies found

that the majority of participants either did not feel effective in assessed level of suicide care or that participants reported lower levels of self-efficacy. This difference could be explained in that the current study does differ in measurement to the aforementioned studies, as this study evaluated specific types of suicide care whereas other studies measured perceived effectiveness of suicide care more generally. This is not to say this is a weakness of the present study, but it might account for differences from previous literature. Also, of note, differences might be apparent as other referenced studies had higher response rates and were more variable samples, including more school psychologists than the current study.

Additionally, differences could be due to the sensitivity of the measure of the current study as it differs from previous studies in that it did not explore the impact of years of experience, job satisfaction, willingness to intervene, attitudes toward suicide care, gender of practitioner, and satisfaction or preparedness relative to training. These differences could account for the ceiling effect and may also play a role in the insignificant amount of differences between rural and urban SMHPs' self-efficacy. A final thought- is our sample perhaps overconfident given the difficulty in predicting suicide deaths?

The proposed predictive model for suicide related care was partially supported. Results suggest perceived barriers, administrative support, role ambiguity, and anxiety significantly and individually predicted self-efficacy while training and average yearly engagement in suicide care did not. The significant predictors of self-efficacy were consistent with SCT (Bandura, 1977a) and past research on self-efficacy among providers. These findings were not necessarily surprising, but they do highlight the variable nature of self-efficacy as well as the importance of administrative support, role clarity, anxiety management, and barrier reduction for SMHPs to confidently engage with adolescents at risk

of attempting suicide. Findings indicate that not only are individual factors influential in levels of self-efficacy, but systemic factors appear to greatly relate to self-efficacy.

Altogether, this model suggests in order for SMHPs to feel the highest degree of self-efficacy possible they must have clarity in their professional role as it relates to suicide care, have minimal barriers to providing care, and have low anxiety when providing suicide care.

It is of note that systemic factors, such as administrative support, appear to strongly predict self-efficacy, while some individual-level factors do not. With the exception of role ambiguity, these systemic factors within school systems have not widely been addressed as important in best practice guidelines. It is recommended that school officials consider fostering administrative support in a manner that encourages school staff and administration to be familiar with and voice support for SMHPs' role in suicide care. This could be accomplished through regular trainings or meetings to review policy and procedure in addition to providing feedback about student progress and SMHPs performance. It is also of great importance that SMHPs be provided with a platform to discuss concerns and barriers to care as well as identifying potential solutions. Potential barriers to be addressed include time constraints and working across multiple schools. Steps that could address such barriers include having administrators be trained in suicide risk assessment to make appropriate referrals to SMHPs or to provide assistance if a SMHP is at another school. Developing county or region wide suicide policies may also assist SMHPs by providing consistent role clarity and clarifying sources of support for SMHPs across schools. Further research should aim to identify other systemic factors that influence the self-efficacy of SMHPs, given the predictive strength of systemic factors in this model. It may also be of use for research to

address other potential individual factors contributing to self-efficacy as to provide insight into how individual and systemic factors interact and function as predictors of self-efficacy.

Other results within the predictive model were quite surprising, particularly the finding that training and average frequency of engagement in suicide care did not predict self-efficacy. The majority of SMHPs reported having some level of suicide care training across all facets of suicide-based care whereas a small minority reported having no training across levels of suicide care. Likewise, average suicide care provision suggests that SMHPs are engaging in suicide care at least two to three times a week. Given the engagement in training and provision of suicide care it was assumed these variables would impact self-efficacy, but they were not found to do so. The non-significance of training and average suicide care provision may exist for several reasons, one of which is multicollinearity. The variables were found to be significantly correlated with one another, therefore in the regression model it is possible these factors did not act entirely as independent variables. Findings that training and experience did not predict self-efficacy for suicide are unexpected, but might also be best understood in light of systemic factors. It is possible positive experiences of training or experience with suicide care provision could be moderated by a non-supportive administrative structure, systemic barriers and poorly defined roles and expectations. In this way, systemic factors may limit individual factors when predicting self-efficacy. These results serve as a call to evaluate self-efficacy across all domains of adolescent mental health care as systemic issues such as lack of support, barriers, and role ambiguity can negatively impact the self-efficacy of SMHPs in suicide care provision. In order to ensure adolescents are receiving the highest quality of care, steps should be taken to support the self-efficacy of SMHPs providing suicide care.

The results of this study have several important implications for improving suicide prevention, assessment, and management in schools. Specifically, results imply the development of school-wide policies to support SMHPs and students during the provision of suicide is necessitated for SMHPs to feel efficacious. Policies should seek to reduce barriers (e.g., time constraints), provide role clarity to SMHPs, and encourage a school climate that includes explicit support from school staff and administration. Additionally, in order to provide increased climate support, participation in more inclusive suicide care training (i.e., targeting teachers, staff, and administration), beyond SMHPs could increase perceptions of self-efficacy.

Limitations

There are several notable limitations in the current study. Firstly, due to attrition and response rates, the current study is underpowered. Secondly, responses were significantly and primarily from SMHPs in urban areas, meaning rural SMHPs were underrepresented in this study. Thirdly, the sample itself was a limitation as convenience sampling was utilized by contacting national and state organizations. Sampling in this manner may have led to biases given that SMHPs within organizations are likely to have access to the same or similar resources. This could have unduly influenced levels of self-efficacy and other variables, potentially making rural and urban comparisons unrepresentative of the actual population. Given that the majority of participants in this study were serving primarily urban areas, rural based SMHPs are underrepresented in addition to a less stringent definition of rural was used to reduce the signal-to-noise ration. Another limitation to the current study is that it cannot be guaranteed organizations distributed the measure to members or that the measure was distributed throughout the entirety of each organization. In other words, the measure may

have been presented to groups with special interest in suicidality as opposed to the entire membership. Similarly, it is possible that individuals who completed the survey, in general, have a greater interest in suicidality, therefore were more likely to complete the survey than other SMHPs. Due to the low sample size and subsequent low power of the study in combination with potential sample bias, results should be interpreted with caution.

Conclusion

This is the first known study to explore self-efficacy among SMHPs when providing ongoing suicide risk management as well as across levels of suicide care on the basis of rurality. Results bear out that SMHPs' self-efficacy may be worth further investigating given the counterintuitive results of the rural-urban comparison and potency of the predictive model of self-efficacy. Across extant self-efficacy literature several factors have been suggested to impact self-efficacy, all of these factors have yet to be explored in relation to SMHPs' provision of suicide care. Results of the current study identified perceived barriers, role ambiguity, administrative support, and anxiety as factors that influence self-efficacy among SMHPs. Factors measured in this study provide insight into the field of suicide intervention and related self-efficacy. This insight may be useful in shaping future research and suicide care provision, as it merely skims the surface of factors that impact self-efficacy in SMHPs and accounts for only a small portion of potential factors that play a role in the complex issue that is adolescent suicide care.

In regards to suicide care provision experiences between SMHPs, significant differences have yet to be identified. This is not to say differences in suicide care between rural and urban areas do not exist, rather differences need to be further explored to identify factors that uniquely impact SMHPs across rural and urban domains. Specifically, it may be

of interest to investigate the self-efficacy of SMHPs in restricting access to lethal means given the influence of mean lethality in rural and urban suicide rate differences. Additionally, community specific and systemic factors should be studied to determine if variables outside of SMHPs control impact attitudes toward suicide care and perceived effectiveness of interventions. If further investigated, factors such as perceptions of student support systems, perceived student adherence to intervention, perceived family or peer engagement in suicide care support, availability of outside referral sources, feasibility of hospitalizing a student with high suicide risk, typical suicide crisis response of emergency departments, availability of community resources, care continuity following hospitalization, and barriers external to schools may provide insight into SMHPs experiences with suicide care provision and related self-efficacy. Individual level factors that affect self-efficacy across levels of suicide care should continue to be investigated, specifically age and gender of the SMHPs, willingness to intervene, job satisfaction, age-level of population served.

The exploratory nature of this study attests to the importance to further explore the overall relationship of SMHPs with suicide care provision and the connection between SMHP's self-efficacy and provision of suicide care. In order to reduce rates of adolescent suicidality, research should address the current state of suicide care provision from the experience of adolescents and providers through community and organizational levels. Doing so will assist in the identification of factors that prevent adolescents from attaining necessary and effective services, ultimately assisting in the reduction of adolescent suicide rates.

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Table 1

Summary of participant descriptive information

| Highest Level of Education | | |
|----------------------------|----------|------------|
| | <i>N</i> | Percentage |
| Masters | 84 | 93.3 |
| Doctorate | 6 | 6.7 |
| Current Position | | |
| School Social Worker | 43 | 47.8 |
| School Counselor | 38 | 42.2 |
| Other | 9 | 10.0 |
| State of Service | | |
| Alaska | 13 | 14.4 |
| Arkansas | 1 | 1.1 |
| California | 2 | 2.2 |
| Colorado | 2 | 2.2 |
| Connecticut | 1 | 1.1 |
| Florida | 9 | 10.0 |
| Georgia | 1 | 1.1 |
| Illinois | 33 | 36.7 |
| Louisiana | 5 | 5.6 |
| Maine | 6 | 6.7 |
| Massachusetts | 2 | 2.2 |
| Michigan | 1 | 1.1 |
| Minnesota | 10 | 11.1 |
| New York | 2 | 2.2 |
| North Dakota | 1 | 1.1 |
| Wisconsin | 1 | 1.1 |
| Years of Experience | | |
| | <i>M</i> | <i>SD</i> |
| | 15.25 | 8.67 |

Table 2

Summary of training participation and self-efficacy across levels of suicide care

| Suicide Care Training | | |
|----------------------------------|----------|------------|
| Identifying risk | <i>n</i> | Percentage |
| None | 1 | 1.1 |
| Some | 15 | 16.7 |
| Train no certification | 39 | 43.3 |
| Trained and certified | 35 | 38.9 |
| Risk Assessment Training | | |
| None | 2 | 2.2 |
| Some | 14 | 15.6 |
| Train no certification | 47 | 52.2 |
| Trained and certified | 27 | 30 |
| Crisis Intervention Training | | |
| None | 7 | 7.8 |
| Some | 13 | 14.4 |
| Train no certification | 44 | 48.9 |
| Trained and certified | 26 | 28.9 |
| Ongoing Risk Management Training | | |
| None | 18 | 20.0 |
| Some | 24 | 26.7 |
| Train no certification | 35 | 38.9 |
| Trained and certified | 13 | 14.4 |
| Self-efficacy | | |
| | <i>M</i> | <i>SD</i> |
| Identify risk | 6.22 | .83 |
| Estimating risk | 6.07 | .98 |
| Intervention | 5.47 | 1.42 |
| Reduce Access to means | 5.84 | 1.29 |
| Hospitalization | 5.92 | 1.35 |
| Reintegration | 5.89 | 1.18 |
| Safety-planning | 6.26 | 1.06 |
| Ongoing care | 5.34 | 1.50 |

Table 3

Summary of Suicide Attempts, Care Provision, and Anxiety

| | Rural | | Urban | | Overall | |
|----------------------------|----------|-----------|----------|-----------|----------|-----------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| Suicide Attempts Per Year | 12.69 | 24.61 | 10.12 | 18.60 | 10.68 | 19.67 |
| Suicide Provision Per Year | 45.70 | 50.71 | 54.24 | 52.89 | 51.32 | 51.18 |
| Intervention | 13.38 | 10.45 | 18.55 | 15.98 | 16.97 | 14.72 |
| Reintegration | 5.32 | 7.00 | 7.62 | 10.10 | 7.02 | 9.23 |
| Hospitalization | 6.19 | 8.35 | 6.40 | 8.26 | 6.21 | 8.07 |
| Ongoing Care | 8.10 | 12.20 | 11.54 | 13.19 | 10.45 | 12.73 |
| Suicide Care Anxiety | 250.37 | 169.94 | 168.23 | 125.98 | 191.06 | 137.83 |
| Identifying risk | 29.12 | 20.56 | 17.60 | 18.06 | 20.39 | 20.95 |
| Assessing risk | 34.18 | 32.04 | 22.25 | 20.56 | 25.00 | 23.68 |
| Immediate intervention | 35.27 | 25.97 | 26.53 | 25.64 | 28.91 | 25.23 |
| Hospitalization | 43.57 | 38.95 | 25.30 | 23.91 | 31.09 | 29.11 |
| Reintegration | 29.32 | 27.00 | 19.16 | 19.02 | 22.49 | 21.28 |
| Ongoing Risk | 43.65 | 27.48 | 37.57 | 28.01 | 39.75 | 27.32 |

Table 4

Summary of Perceived Role in Suicide Care

| Perceived Role | <i>n</i> | Percentage |
|----------------------------|----------|------------|
| Identifying Risk | | |
| Never | 0 | 0 |
| Sometimes | 3 | 3.7 |
| About Half the time | 4 | 4.9 |
| Most of the Time | 23 | 28 |
| Always | 52 | 63.4 |
| Estimating Risk | | |
| Never | 1 | 1.2 |
| Sometimes | 4 | 4.8 |
| About Half the time | 1 | 1.2 |
| Most of the Time | 17 | 20.5 |
| Always | 60 | 72.3 |
| Initiating hospitalization | | |
| Never | 0 | 0 |
| Sometimes | 6 | 7.2 |
| About Half the time | 1 | 1.2 |
| Most of the Time | 21 | 25.3 |
| Always | 55 | 66.3 |

Safety Planning

| | | |
|---------------------|----|------|
| Never | 1 | 1.3 |
| Sometimes | 2 | 2.5 |
| About Half the time | 4 | 5.1 |
| Most of the Time | 26 | 32.9 |
| Always | 46 | 58.2 |

Immediate Risk Reduction

| | | |
|---------------------|----|----|
| Never | 0 | 0 |
| Sometimes | 0 | 0 |
| About Half the time | 4 | 5 |
| Most of the Time | 24 | 30 |
| Always | 52 | 65 |

Ongoing Care

| | | |
|---------------------|----|------|
| Never | 1 | 1.3 |
| Sometimes | 7 | 8.9 |
| About Half the time | 7 | 8.9 |
| Most of the Time | 27 | 34.2 |
| Always | 37 | 46.8 |

Chronic Risk Management

| | | |
|---------------------|----|------|
| Never | 0 | 0 |
| Sometimes | 4 | 5.1 |
| About Half the time | 4 | 5.1 |
| Most of the Time | 25 | 32.1 |
| Always | 45 | 57.7 |

Reintegration

| | | |
|---------------------|----|------|
| Never | 0 | 0 |
| Sometimes | 2 | 2.6 |
| About Half the time | 2 | 2.6 |
| Most of the Time | 19 | 24.7 |
| Always | 54 | 70.1 |

Table 5

Summary of MANOVA for Variables Correlated with Rurality

| Variable | Rural | | Urban | | <i>F</i> | <i>p</i> | η^2 |
|------------------------|----------|-----------|----------|-----------|----------|----------|----------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | | | |
| Perceived Barriers | 49.21 | 18.41 | 45.14 | 16.36 | .65 | .42 | .01 |
| Administrative Support | 11.64 | 2.50 | 11.92 | 1.94 | .20 | .65 | <.01 |
| Role Ambiguity | 38.93 | 12.77 | 43.12 | 10.23 | 1.66 | .20 | .03 |
| Average Suicide Care | 45.68 | 50.71 | 54.24 | 52.88 | .22 | .64 | <.01 |
| Anxiety | 264.54 | 177.34 | 176.1 | 126.84 | 4.49 | .03 | .07 |
| Training | 7.43 | 1.02 | 7.77 | 0.70 | 2.11 | .15 | .03 |
| Self-efficacy | 104.93 | 14.93 | 107.06 | 13.19 | .27 | .60 | <.01 |
| Wilks Lambda | | | .84 | | | | |
| <i>F</i> | | | 1.33 | | | | |

(N = 66)

Table 6

Summary of Multiple Regression Analysis for Variables Predicting Self-Efficacy

| Variable | Self-efficacy | | | | |
|------------------------|---------------|-------------|---------|----------|-------------------------|
| | <i>B</i> | <i>SE B</i> | β | <i>p</i> | <i>r_{part}</i> |
| Perceived Barriers | -.48 | .09 | -.59 | <.01 | -.382 |
| Administrative Support | 1.79 | .68 | .27 | .01 | .192 |
| Role Ambiguity | -.33 | .13 | -.27 | .01 | -.186 |
| Average Suicide Care | 1.44 | 2.79 | .042 | .61 | .037 |
| Anxiety | -.03 | .01 | -.27 | .01 | -.250 |
| Training | .89 | 1.54 | .05 | .56 | .042 |
| <i>R</i> ² | .67 | | | | |
| <i>F</i> | 21.16 | | | | |

(N = 70)

Appendix A

Institutional Review Board Approval

**INSTITUTIONAL REVIEW BOARD**

Office of Research Protections

ASU Box 32068

Boone, NC 28608

828.262.2692

Web site: <http://researchprotections.appstate.edu>Email: irb@appstate.edu

Federalwide Assurance (FWA) #00001076

To: Rebekah Smith
Psychology
CAMPUS EMAIL

From: Monica Molina, IRB Associate Administrator

Date: 3/13/2018

RE: Notice of IRB Exemption

Agrants #:

Grant Title:

STUDY #: 18-0078

STUDY TITLE: School Mental Health Providers Self-Efficacy in Managing Suicide

Exemption Category: (2) Anonymous Educational Tests; Surveys, Interviews or Observations

This study involves minimal risk and meets the exemption category cited above. In accordance with 45 CFR 46.101(b) and University policy and procedures, the research activities described in the study materials are exempt from further IRB review.

All approved documents for this study, including consent forms, can be accessed by logging into IRBIS. Use the following directions to access approved study documents.

1. Log into IRBIS
2. Click "Home" on the top toolbar
3. Click "My Studies" under the heading "All My Studies"
4. Click on the IRB number for the study you wish to access
5. Click on the reference ID for your submission
6. Click "Attachments" on the left-hand side toolbar
7. Click on the appropriate documents you wish to download

Study Change: Proposed changes to the study require further IRB review when the change involves:

- an external funding source,
- the potential for a conflict of interest,
- a change in location of the research (i.e., country, school system, off site location),
- the contact information for the Principal Investigator, the addition of non-Appalachian State University faculty, staff, or students to the research team,
- or the basis for the determination of exemption. Standard Operating Procedure #9 cites examples of changes which affect the basis of the determination of exemption on page 3.

Investigator Responsibilities: All individuals engaged in research with human participants are responsible for compliance with University policies and procedures, and IRB determinations. The Principal Investigator (PI), or Faculty Advisor if the PI is a student, is ultimately responsible for ensuring the protection of research participants; conducting sound ethical research that complies with federal regulations, University policy and procedures; and maintaining study records. The PI should review the IRB's list of PI responsibilities.

To Close the Study: When research procedures with human participants are completed, please send the Request for Closure of IRB Review form to irb@appstate.edu. If you have any questions, please contact the Research Protections Office at (828) 262-2692 (Robin).

Best wishes with your research.

Websites for Information Cited Above

Note: If the link does not work, please copy and paste into your browser, or visit <https://researchprotections.appstate.edu/human-subjects>.

1. Standard Operating Procedure #9:

<http://researchprotections.appstate.edu/sites/researchprotections.appstate.edu/files/IRB20SOP920Exempt%20Review%20Determination.pdf>

2. PI responsibilities:

<http://researchprotections.appstate.edu/sites/researchprotections.appstate.edu/files/PI20Responsibilities.pdf>

3. IRB forms: <http://researchprotections.appstate.edu/human-subjects/irb-forms>

CC: John Jameson, Psychology

Appendix B

Consent Form for Human Subjects

You are being invited to take part in a research study about managing adolescent suicidality. By completing this study, we hope to learn the current state of self-efficacy in suicide risk management practices among SMHPs in rural and urban school settings. You will be asked to complete a survey with questions related to the provision of suicide related care to adolescents. This study is anonymous. That means that no one, not even members of the research team, will know that the information you gave came from you. To the best of our knowledge, the risk of harm for participating in this research study is no more than you would experience in everyday life. There may be no personal benefit from your participation, but the information gained by doing this research may help others in the future by providing information that will be used to guide future research and provide direction in addressing the needs of school mental health providers in suicide management.

Your participation in this research is completely voluntary. You cannot volunteer for this study if you are not a school mental health provider. If you choose not to volunteer, there will be no penalty and you will not lose any benefits or rights you would normally have. If you decide to take part in the study you still have the right to decide at any time that you no longer want to continue. There will be no penalty and no loss of benefits or rights if you decide at any time to stop participating in the study. If you decide to participate in this study, let the research personnel know. A copy of this consent form is yours to keep.

The people conducting this study will be available to answer any questions concerning this research, now or in the future. You may contact the Principal Investigator at smithrd5@appstate.edu or the faculty advisor at jamesonjp@appstate.edu. If you have questions about your rights as someone taking part in research, contact the Appalachian Institutional Review Board Administrator at 828-262-2692 (days), through email at irb@appstate.edu or at Appalachian State University, Office of Research and Sponsored Programs, IRB Administrator, Boone, NC 28608.

Appalachian State University's Institutional Review Board has determined this study to be exempt from IRB oversight.

By continuing to the research procedures, I acknowledge that I am at least 18 years old, have read the above information, and agree to participate.

Appendix C

School Mental Health Providers' Suicide Management Self-Efficacy Survey

Demographics

- 1. How many years have you served in a school support staff position (e.g., school psychologist, school counselor, or school social worker)?**

Slider

- 2. What is the highest degree you have attained?**

Associates Bachelors Masters Doctorate

- 3. What is your current position?**

School Social Worker/School Counselor/School Psychologist/Nurse/Contract Mental Health Provider (not employed in a school)/Other (please specify) _

- 4. In what state do you provide services?**

Dropdown selection

- 5. In what county/parish do you provide services? (This information will be used to determine whether your district is a rural or urban area.)**
- 6. What percentage of students in the school(s) you serve receive free or reduced meals?**
- 7. At the school(s) you serve, how many student suicide attempts have been reported in the past year?**
- 8. On average, how many times do you provide services related to suicide (e.g., suicide screens, risk assessments, or safety plans for students at risk of suicide) per year?**

- 9. On average, how many times have you been involved with helping a student reintegrate into school after hospitalization for a suicide attempt per year?**
- 10. On average, how many times have you contacted emergency services in order to determine whether a student required hospitalization due to high suicide risk per year?**
- 11. On average, how many times have you provided ongoing services (i.e., two or more scheduled meetings) to students with a known history of suicide attempts per year?**

12. Rate your level of anxiety when dealing with the following situations:

0 10 20 30 40 50 60 70 80 90 100

Identifying a student at risk of suicide

Assessing level of suicide risk

Working with a student to reduce immediate suicide risk

Managing chronic suicide risk

Reintegrating a student hospitalized for suicide risk into school

Initiating hospitalization for a suicidal student

Working with others to reduce suicide risk (e.g., other agencies, parents, etc.)

13. During your time at your current school, have one or more students died by suicide?

Yes

No

14. During your time at your current school, have one or more students attempted suicide?

15. Do you have/know coworker(s) who have had student(s) who attempted suicide?

16. Do you have/know coworker(s) who have had student(s) die by suicide?

17. I believe my coworker(s) have handled student suicide attempts competently.

Strongly agree/Somewhat agree/Neither agree nor disagree/Somewhat disagree/Strongly

disagree/N/A

18. Please select the following that represents your training related to suicidality.

| | None | Some | Trained no certification | Trained and certified |
|---|------|------|--------------------------|-----------------------|
| Have you participated in training for suicide prevention? | | | | |
| Have you participated in training for suicide risk assessment? | | | | |
| Have you participated in training for ongoing or chronic suicide risk management? | | | | |
| Have you participated in training for suicide crisis intervention? | | | | |

20. Please select the following that best represents your training in chronic or ongoing suicide risk management (e.g., monitoring and providing services for students with risk that continues for weeks or months).

| | N/A | Less than one hour | 1 hour | 2 hours | 3 hours | 4 hours | 5 hours | 6 hours | 7 hours | 8 hours | 9 hours | 10+ hours |
|--|-----|--------------------|--------|---------|---------|---------|---------|---------|---------|---------|---------|-----------|
| Continued Education | | | | | | | | | | | | |
| Direct Supervision | | | | | | | | | | | | |
| Professional development | | | | | | | | | | | | |
| Graduate school courses | | | | | | | | | | | | |
| Mental Health First Aid | | | | | | | | | | | | |
| Indirect supervision (e.g., case presentations, staffing a case) | | | | | | | | | | | | |
| None | | | | | | | | | | | | |

22. Please select the following programs you have participated in.

Prevent Reaffirm Evaluate Provide and Respond Educate (PREPaRE--NASP)

Question Persuade Refer (QPR)

Applied Suicide Intervention Skills Training (ASIST)

Counseling on Access to Lethal Means (CALM)

Collaborative Assessment and Management of Suicidality (CAMS)

Signs of Suicide (SOS)

Adolescent Suicide Assessment Protocol (ASAP)

Coping And Support Training (CAST/CARE)

Raising Awareness of Personal Power (RAPP)

Reconnecting Youth

South Elgin High School Suicide Prevention Plan (SEHS)

Suicide, Options, Awareness, and Relief (SOAR)

Sources of Strength

The Good Behavior Game

Yellow Ribbon Suicide Prevention Game

Youth Suicide Prevention Program

Other (please specify)

Section: Role Ambiguity**23. Please rate your level of agreement with the following statements in relation to your professional experiences with adolescent suicide crises.**

Strongly agree/Agree/Somewhat agree/Neither agree nor disagree/Somewhat disagree/Disagree/Strongly disagree

There is a clear plan with defined roles for suicide crisis response in my school(s).**If a suicide were to occur, my school(s) has a detailed plan on how to respond.****We have policies in my school(s) that help us to respond to suicide crisis.****There is a suicide crisis response team in my school(s).**

- There are clear, planned goals and objectives for my role suicide crisis response.**
- 24. Please rate your level of agreement with the following statements based on your experiences within your current school(s) of employment.**

Strongly agree/Agree/Somewhat agree/Neither agree nor disagree/Somewhat disagree/Disagree/Strongly disagree

The administration in the school(s) I serve supports me in work related to suicide care.

I have access to the outside supports I need to manage suicidal students effectively.

My school provides the resources I need to complete duties necessary for suicide management.

I have training opportunities necessary for management of ongoing or chronic suicide risk.

Administration encourages me to work with outside agencies to reduce student suicide risk.

Section: Perceived Barriers

- 25. Please rate your level of agreement with the following statements in relation to your professional experiences with adolescent suicidality.**

Strongly agree/Agree/Somewhat agree/Neither agree nor disagree/Somewhat disagree/Disagree/Strongly disagree

I have adequate time to identify suicide risk in students.

I have adequate time to estimate relative suicide risk in students.

I have adequate time to treat students with significant suicide risk.

I have adequate time to refer students with significant suicide risk to providers outside of the school.

I have adequate time to assist in the reintegration of a student hospitalized for suicide risk.

I have adequate time to provide care for students with ongoing or chronic suicide risk.

I have adequate training to identify suicide risk in students.

I have adequate training to estimate relative suicide risk in students.

26. Please rate your level of agreement with the following statements in relation to your professional experiences with adolescent suicidality.

Strongly agree/Agree/Somewhat agree/Neither agree nor disagree/Somewhat disagree/Disagree/Strongly disagree

I have adequate training to estimate relative suicide risk in students.

I have adequate training to treat students with significant suicide risk.

I have adequate training in regard to reducing access to lethal means.

I have adequate training to refer students with significant suicide risk.

I have adequate training to reintegrate a student hospitalized for suicide risk or an attempt.

I have adequate training to provide care for students with ongoing or chronic suicide risk.

I have adequate access to specialty mental healthcare providers for the purpose of referral for suicide risk.

I have access to a suicide crisis response team.

Section: Perceived Role**27. Identifying suicide risk for students in your school(s) is the responsibility of:**

Never/Sometimes/About half the time/Most of the time/Always

School Support Staff (e.g., School Social Worker, School Psychologist, School Counselor)

Outside Mental Health Provider

Teachers and Administrators

Students' Family/Friends

Other students

28. Estimating the degree of relative suicide risk for students in your school(s) is the responsibility of:

Never/Sometimes/About half the time/Most of the time/Always

School Support Staff (e.g., School Social Worker, School Psychologist, School Counselor).

Outside Mental Health Provider

Teachers and Administrators

Students' Family/Friends

Other students

29. Contacting emergency services in order to determine whether a student in your school requires hospitalization due to high suicide risk is the responsibility of:

Never/Sometimes/About half the time/Most of the time/Always

School Support Staff (e.g., School Social Worker, School Psychologist, School Counselor).

Outside Mental Health Provider

Teachers and Administrators

Students' Family/Friends

Other students

30. Developing safety plans for students in your school(s) at significant risk of suicide is the responsibility of:

Never/Sometimes/About half the time/Most of the time/Always

School Support Staff (e.g., School Social Worker, School Psychologist, School Counselor).

Outside Mental Health Provider

Teachers and Administrators

Students' Family/Friends

Other students

31. Working with students in your school to reduce their immediate suicide risk is the responsibility of:

Never/Sometimes/About half the time/Most of the time/Always

School Support Staff (e.g., School Social Worker, School Psychologist, School Counselor).

Outside Mental Health Provider

Teachers and Administrators

Students' Family/Friends

Other students

32. Providing ongoing treatment to students in your school with significant suicide risk is the responsibility of:

Never/Sometimes/About half the time/Most of the time/Always

School Support Staff (e.g., School Social Worker, School Psychologist, School Counselor).

Outside Mental Health Provider

Teachers and Administrators

Students' Family/Friends

Other students

33. Coordinating with outside mental health professionals regarding suicide risk for students in your school(s) is the responsibility of:

Never/Sometimes/About half the time/Most of the time/Always

School Support Staff (e.g., School Social Worker, School Psychologist, School Counselor).

Outside Mental Health Provider

Teachers and Administrators

Students' Family/Friends

Other students

34. Management of ongoing or chronic suicide risk for students in your school(s) is the responsibility of:

Never/Sometimes/About half the time/Most of the time/Always

School Support Staff (e.g., School Social Worker, School Psychologist, School Counselor).

Outside Mental Health Provider

Teachers and Administrators

Students' Family/Friends

Other students

35. Helping a student reintegrate into school after suicide-related hospitalization is the responsibility of:

Never/Sometimes/About half the time/Most of the time/Always

School Support Staff (e.g., School Social Worker, School Psychologist, School Counselor).

Outside Mental Health Provider

Teachers and Administrators

Students' Family/Friends

Other students

Section: Self-efficacy

36. Please rate your level of agreement with the following statements in relation to your professional experiences with suicidal adolescents.

Strongly agree/Agree/Somewhat agree/Neither agree nor disagree/Somewhat disagree/Disagree/Strongly disagree

- 1. I feel confident in my ability to discuss my concerns with a student exhibiting significant signs of suicide risk.**
- 2. I feel confident in my ability to identify suicide risk in a student.**
- 3. I feel confident in my ability to estimate relative suicide risk in a student.**
- 4. I feel confident in my ability to treat students with suicide risk.**

5. I feel confident in my ability to discuss reducing access to lethal methods of suicide such as firearms or dangerous medications.
6. I feel confident in my ability to refer students with significant suicide risk for mental health services outside of the school.
7. I feel confident in my ability to coordinate with outside mental health professionals to manage students' suicide risk.
8. I feel confident in my ability to provide care for a student with ongoing or chronic suicide risk.
9. I feel confident in my ability to assist in reintegrating a student who has been hospitalized for suicide risk.
10. I am confident in my ability to initiate potential hospitalization with a suicidal student.
11. I am confident in my ability to help identify suicide risk factors with a student.
12. I am confident in my ability to openly discuss suicide.
13. I am confident in my ability to discuss student suicide risk and coordinate safety plans with family members.
14. I am confident in my ability to discuss student suicide risk and coordinate safety plans with school administrators.
15. I am confident in my ability to discuss student suicide risk and coordinate safety plans with teachers.
16. I am confident in my ability to discuss student suicide risk and coordinate safety plans with the student at risk

Vita

Rebekah Smith was born in Winston-Salem, NC to Mark and Annette Smith. She graduated from Appalachian State University in 2015 with a Bachelor of Science degree in psychology. In August of 2016 she began her pursuit of a Master of Arts degree in Clinical Psychology. She is currently continuing to earn her M.A. with hopes of completing the degree requirements in May, 2019. Ms. Smith aims to continue her involvement in clinical psychology by working as an inpatient psychologist. Ms. Smith currently resides in Boone NC with her dog, Olive, and hopes to soon move to Raleigh NC.